# W. Andrew Jackson, P.E., Ph.D.

## **Contact Information**

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#### **Education**

Ph.D.	Engineering Science (Environmental Engineering)	1996	Louisiana State University, Baton Rouge
M.S.	Engineering Science (Environmental Engineering)	1993	Louisiana State University, Baton Rouge
B.S.	Biology	1990	Rhodes College, Memphis, TN

# **Professional Experience**

Professor	2010-	Department of Civil and Environmental Engineering Texas Tech University
Associate Professor	2004-2010	Department of Civil and Environmental Engineering Texas Tech University
Assistant Professor	1998-2004	Department of Civil and Environmental Engineering Texas Tech University
Adjunct Professor	2001-present	The Institute of Environmental and Human Health Texas Tech University
Postdoctoral Scientist	1996-1998	Department of Civil and Environmental Engineering Louisiana State University
Research Associate	1995-1996	Department of Civil and Environmental Engineering Louisiana State University

## **Professional and University Service**

- Senior Associate Editor- Air Water and Soil Pollution. (20012-present)
- Associate Editor-Air Water and Soil Pollution. (2004-2012)
- Editorial Board Member-Air Water and Soil Pollution. (2002-2004)
- Editorial Board- Environmental Toxicology and Chemistry (2004-2007 and 2010-2013)
- Ad-Hoc Manuscript Review, (Environmental Science and Technology, Journal of Geotechnical and Environmental Engineering, Journal of Bioremediation, Journal of Environmental Quality, Journal of Environmental Engineering, Journal of Environmental Engineering Science, Journal of Ecological Engineering, Journal of Agricultural and Food Chemistry).
- Review Panels
  - o NSF SBIR (2008, 2007, 2006, 2004, 2003, 2002)
  - o SERDP Review Panel (2005)
  - o NASA OCT Early Career Award
- Association of Environmental Engineering and Science Professors (2003-present)
- Institute of Aeronautics and Astronautics
  - o Life Sciences and Systems Technical Committee
    - 2004-Present
    - Vice Chair; 2008-2009
    - Chair; 2009-2011
- Water Environment Federation
  - o Industrial Waste Committee (2003-2006)

- o Texas Section Board Member
- American Chemical Society (Thematic Program Selection Committee, 2008)
- International Conference on Environmental Systems
  - Steering Committee 2006-2013
  - o Vice Chair 2012
  - o Chair 2013
- Session Chair (GSA, 2005; ICES, 2006, 2008, 2009, 2010); SETAC 2004, 2007; AGU 2008; Battelle 2010, 2012; Goldschmidt 2010)
- Texas Department of Transportation (Environmental Technical Advisory Panel, 1999-2008).
- Santa Clara Water District (Science Advisory Committee for EPA Funded Study, 2006)
- Hill Air Force Base (Perchlorate Study Advisory Committee, 2006-2007)

## **Texas Tech University**

#### Graduate Student Advisor \*Co-Advised

- \*Kyle Kubista (M.S. Civil and Environmental Engineering, May 2012) Comprehensive Trade Study of Bioreactors and Advancement of Membrane-aerated Biologic Reactors for Treatment of Space Based Waste Streams.
- Sixuan Wang (M.S. Civil and Environmental Engineering Expected, August 2011) Heterogeneous Perchlorate Production.
- Phani Ponnado (M.S. Civil and Environmental Engineering, May 2011) Determination of Groundwater Velocity in-situ by using Passive Samplers at the Sediment Water Interface.
- Balaji Rao (Ph.D. Civil and Environmental Engineering, December 2010), Production of Perchlorate in the Atmosphere.
- \*Nick Landes (Ph.D. Civil and Environmental Engineering December 2010), Modeling of Simultaneous Nitrification-Denitrification Reactors.
- Kristin Peterson (M.S. Civil and Environmental Engineering August 2010), Design and Construction of a TRL 5 Bioreactor for a Lunar Base WasteStream.
- Suhas Suhas (M.S. Civil and Environmental Engineering Expected August 2010), Atmospheric Generation of Perchlorate by Electrical Discharge.
- Sameera Sanka (M.S. Civil and Environmental Engineering -May 2009), Uptake Kinetics of RDX in Wetland Plants.
- \*Jason Crawley (M.S. Civil and Environmental Engineering-December 2007), Impact of Biological Pretreatment on Reverse Osmosis Performance in Space Flight.
- Nick Landes (M.S. Civil Engineering- August 2007)
- Balaji Rao (M.S. Civil and Environmental Engineering -December 2006), A Reservoir of Perchlorate in the Unsaturated Zone of Arid and Semi-arid Lands.
- Srinath Rajagopalan (Ph.D. Civil and Environmental Engineering-December 2005), Distribution and Source Evaluation of Perchlorate in Arid and Semi-Arid Regions.
- Patil Laxman (M.S. Civil Engineering-May 2005). Perchlorate Distribution in Unsaturated Sediments of the HP.
- Santosh Nishtala (M.S. Civil Engineering December 2005). Characterization of Bridge Discharge to Receiving Streams.
- Sangeetha Balakrishnan (M.S. Civil Engineering -December 2005), Perchlorate Production from Anodic Protection Systems.
- Aniruddha Dhutta (M.S. Civil Engineering- May 2004)
- Joseph Prethi (M.S.-August 2004). Uptake of Perchlorate in Forage Crops.
- Sangeetha Arunagiri, (M.S.-August 2004). Electrochemical Generation of Perchlorate from Chlorinated Drinking Water.
- Kui Tan (Ph.D. Civil Engineering -August 2003). Fate of Perchlorate in Natural Systems: Intrinsic Biodegradation, Plant Uptake, and Remediation Potential of Wetlands.
- Audra Morse (Ph.D. Civil Engineering -May 2003). Fate of Amoxicillin in a Water Recycling System.
- Tony Rector (M.S. Civil Engineering -December 2003). Determination of the Fate of an Alternate Surfactant in Water Recycle Systems.

- Srinath Rajagopalan (M.S. Civil Engineering -December-2002). Use of Alternative Water Sources in Construction Applications.
- Kishor Kotha (M.S. Civil Engineering -December 2001). Use of Geotextiles in Wastewater Applications.
- Mi-ae Jeon (M.S. Civil Engineering -August 2001). Remediation of Perchlorate Using Electrokinetic Injection.
- Wesley Ingram (M.S. Civil Engineering -May 2000). Evaluation of Septic System Drainfields.
- Amandeep Kang (M.S. Civil Engineering -December 2000). Assessment of the Potential for the Natural Attenuation of Chlorinated Solvents in Contaminated Groundwater in the Texas High Plains.

#### **Committee Member**

- Richard Francis (M.S. Civil Engineering- May 2005)
- Jiafan Wang (Ph.D. Environmental Toxicology- 2011)
- Kartick Venkataraman (Ph.D. Civil and Environmental Engineering, December 2010)
- Raghavendhran Avanasi (M.S. Environmental Toxicology-August 2010)
- Adcharee Karnjanapiboonwong (Ph.D. Environmental Toxicology- 2010)
- Mike Abel (Ph.D. Committee Environmental Toxicology-August 2009)
- Jennie Munster (Ph.D. Geosciences-August 2008) (SUNNY-Stony Brook)
- Baohong Zhang (Ph.D., Environmental Toxicology-December 2006)
- Cheng Qiuqiong (Ph.D., Environmental Toxicology-May 2006)
- Bala Vairavan (M.S. Civil Engineering- May 2005)
- Deb Livesay (M.S. Environmental Toxicology- December 2005)
- Srikara Rao (M.S. Civil Engineering- December 2004)
- Sowjanya Venkata (M.S. Civil Engineering (Report)- December 2004)
- Noel Ruiz (M.S. Civil Engineering-May 2005)
- Lu Yu, (Ph.D. Environmental Toxicology, August 2004)
- Eric McLamore (M.S. Civil Engineering-August 2004)
- Lokesh Padhye (M.S. Civil Engineering-August 2004)
- Srinivasakumar Anandam (M.S. Civil Engineering-August 2004)
- Dieshkumar Anbumani, (M.S. Civil Engineering-August 2004)
- Nilesh Waghdhare (M.S. Civil Engineering-May 2004)
- Scott Severt (M.S. Environmental Toxicology –August 2004)
- Chandra Bhongir (M.S. Civil Engineering-August 2004)
- Johnathan Boyd (Ph.D. Environmental Toxicology –August 2004)
- Anna Herboldsheimer (M.S. Environmental Toxicology –December 2003)
- Lu Yu, (M.S. Environmental Toxicology -August 2002)
- Chang Lee, (M.S. Civil Engineering-May 2002)
- Mindy Landrum (M.S. Environmental Toxicology -August 2002)

#### **Post Doctoral Advisees**

- Dr. Srinath Rajagopalan, Ph.D. from Texas Tech University (2006-2009)
- Dr. Namgoo Kang, Ph.D. from Purdue University (2005-2006, co-advised with Todd Anderson)
- Dr. Kui Tan, Ph.D. from Texas Tech University (2003-2004)

## **University Committee Assignments**

- Faculty Grievance Committee, 2005-2008
- Faculty Senate, 2003-2006
- Committee to Rewrite the University Research Strategic Plan, 1999

#### **College and Department Committee Assignments**

- Graduate Advisor 2011- (Department)
- Awards Committee, 2003-2007; 2012- (Department)
- Chair-Space Committee, 2003-present (Department).
- Chair-HEAF Committee, 2007-present (Department)

- Recruitment Committee, 1998-2003 (Department).
- Undergraduate Advisor (~60 per year)
- Promotion and Tenure Committee, 2006- (College)
- Strategic Planning Committee, 2005- 2007(College)
- Awards Committee, 2001-2002; 2011- (College).
- Faculty Advisor for Society of Environmental Professionals, 1999-present.

#### Honors

- Provost's Integrated Scholar (2011)
- Whitacre Faculty Research Fellow (2007-2010)
- **Department of Defense Strategic Environmental Development Program**, Project of the Year in the Environmental Restoration Category (2007)
- Environmental Science and Technology, Environmental Science Paper of the Year (2005) (39:1569-1575)
- Texas Tech Department of Civil and Environmental Engineering Researcher of the Year (2002, 2004, 2005, 2006)
- Lockheed Martin College of Engineering Teaching Award (May 2002)
- Department of Civil and Environmental Engineering Louisiana State University, LSU Alumni Graduate Fellow (1990-1994)

### **Honors by Students Under My Supervision**

- 1. Balaji Rao, Best Student Paper Award. 2010 Remediation of Chlorinated and Recalcitrant Compounds Seventh International Conference. Monterey, CA
- 2. Nick Landes, 2<sup>nd</sup> Place Student Poster Competition. 38<sup>th</sup> International Conference on Environmental Systems (2008)
- 3. Jason Crawley, 1<sup>st</sup> Place Student Poster Competition. 37<sup>th</sup> International Conference on Environmental Systems (2007)
- 4. Morse, A., Jackson, A., Rainwater, K., and Pickering, K. 2002. Membrane Aerated Reactors for the Treatment of Simulated Wastewater, WEFTEC 2002, Chicago, IL, September 28-October 3. Awarded Second Place in the WEFTEC 2002 Poster Symposium.

# Research Grants Funded (PI Listed First, Funding Shown is Total Award)

- 1. 2012-2014, NASA (101,400) **W. Andrew Jackson** and A. Morse. Optimization and Evaluation of a Membrane Aerated Nitrification/denitrification Bioreactor for Sustainable Human Habitation.
- 2. 2012-2014, Louisiana Oil Spill Coordinators Office/LSU (50,000) **W. Andrew Jackson**, T. Anderson, and J Horita. BP Oil Spill Research.
- 3. 2012-2013, B&W Pantex, LLC (70,000) Ken Rainwater and **W. Andrew Jackson.** High Plains Aquifer Chromium Investigation.
- 4. 2012-2013, TxDOT (230,994) **W. Andrew Jackson**, William Lawson, Sanjay Sendaheera, Audra Morse, Ken Rainwater, Daan Lang. Snow and Ice.
- 5. 2009-2013, EPA (55,000) K. Rainwater, A. Morse, T. Anderson, and **W. Andrew Jackson**. City of Lubbock Canyon Lakes Water Reuse Project.
- 6. 2010-2010, DOD (67,000) M. Pantoya, **W. Andrew Jackson**, T. Anderson, G. Cobb, et al. Synthesis characterization and environmental impact studies of advanced energetic materials.
- 7. 2010-2010, NASA/Lynntech (16,000) A. Morse and **W. Andrew Jackson**. SBIR Novel Self-cleaning Surfaces for Biofouling Prevention in Wastewater Lines of Space Systems.
- 8. 2010-2012, NASA (100,000) Engineering Support for Extended Human and Robotic Space Flight Missions.
- 9. 2009-2010, NASA. (214,000) **W. Andrew Jackson,** Steven Morse, and Audra Morse. Development and testing of a TRL 5 Bioreactor for Pretreatment of a Lunar Surface Wastewater
- 10. 2009-2010, NASA (70,000) W. **Andrew Jackson**, Audra Morse, and Lianfa Song. A Sustainable Water Treatment System for Long Term Space Habitation.
- 11. 2008-2014; SERDP. (\$560,000) **Andrew Jackson**, Todd Anderson, and Ken Rainwater. Research Needs Related to Natural Perchlorate.

- 12. 2008-2009, B&W Pantex LLC. (\$127,000) **Andrew Jackson**, Todd Anderson, and Ken Rainwater, Laboratory Demonstration of In Situ Treatment Effectiveness for Reduction of Perchlorate, TCE, and Chromium at Pantex Plant.
- 13. 2008-2009, U.S. Department of Energy. (\$688,000) Ken Rainwater, Audra Morse, **Andrew Jackson**, Lianfa Song, and Phil Nash. Great Plains Wind Power Test Facility.
- 14. 2008-2009, NASA (\$150,000) Audra Morse, **Andrew Jackson**, and Todd Anderson. Evaluation of NASA's Advanced Life Support Integrated Water Recovery System for Non-Optimal Conditions and Terrestrial Applications.
- 15. 2008, Lynntech Inc. (\$25,000) Audra Morse and **Andrew Jackson.** Evaluation of Water Quality Benefits and Reduced RO Cost.
- 16. 2005-2008, SERDP (\$570,000) **Andrew Jackson**, Ken Rainwater, Todd Anderson, Sandy Dasgupta, and Moira Ridley. Identification and Characterization of Natural Sources of Perchlorate.
- 17. 2007-2008 NASA. (\$217,373) **Andrew Jackson**, Audra Morse, Todd Anderson, and Darryl James. Evaluation of NASA's Advanced Life Support Integrated Water Recovery System for Non-Optimal Conditions and Terrestrial Applications.
- 18. 2006-2007 SERDP (\$110,186) Todd Anderson and **Andrew Jackson**, Continuation of an Integrated Field and Laboratory Investigation with Wildlife: Ecological Risk Assessment of Military Energetic Residues Associated with Live Fire Ranges-Phase 9.
- 19. 2005-2006. SERDP (\$90,384) Todd Anderson and **Andrew Jackson**, Continuation of an Integrated Field and Laboratory Investigation with Wildlife: Ecological Risk Assessment of Military Energetic Residues Associated with Live Fire Ranges-Phase 8.
- 20. 2005-2006, US Bureau of Reclamation (\$99,000) Andrew Swift, Ken Rainwater, and **Andrew Jackson**, Efficient and Cost Effective Combination of Wind Power and Desalination Technology.
- 21. 2003-2004, TNRCC (\$532,000) **Andrew Jackson**, Ken Rainwater, Todd Anderson, Thomas Lehman, and Moira Ridley, Perchlorate Assessment in the Southern High Plains.
- 22. 2005-2006, NASA. (\$428,971) **Andrew Jackson,** Audra Morse, Todd Anderson, and Darryl James, Evaluation of NASA's Advanced Life Support Integrated Water Recovery System for Non-Optimal Conditions and Terrestrial Applications, Year 5.
- 23. 2004-2005, SERDP (\$55,000) contracted to **Andrew Jackson**, Todd Anderson and Phil Smith. (\$900,000). Continuation of the Ecological Risk Assessment of Perchlorate and Explosives in Avian Species, Rodents, Reptiles, Amphibians, and Fish: An Integrated Laboratory and Field Investigation (Phase VII).
- 24. 2001-2004, SERDP (\$53,795) contracted to **Andrew Jackson**, Todd Anderson and Phil Smith (\$2,000,000) Continuation of the Ecological Risk Assessment of Perchlorate and Explosives in Avian Species, Rodents, Reptiles, Amphibians, and Fish: An Integrated Laboratory and Field Investigation (Phase VI).
- 25. 2003-2005, NASA. (\$620,000) **Andrew Jackson**, Audra Morse, Ken Rainwater, Ted Wiesner, and Todd Anderson. Evaluation of NASA's Advanced Life Support Integrated Water Recovery System for Non-Optimal Conditions and Terrestrial Application.
- 26. 2002-2004, Texas Department of Transportation. (\$109,000) Cliff Fedler, Dean Muirhead, Cary Green, **Andrew Jackson**, and John Borrelli., Utilizing Compost as an Alternative Method to Standard Seeding.
- 27. 2002-2005, Texas Department of Transportation. (\$168,200) **Andrew Jackson**, Dean Muirhead, and David Thompson., Bridge Run-off Characterization.
- 28. 2002-2003, TNRCC. (\$410,000) **Andrew Jackson**, Ken Rainwater, Todd Anderson, Thomas Lehman, Moira Ridley, and Tony Mollhagen., Perchlorate Assessment in the Southern High Plains.
- 29. 2002-2003. USGS/TWRI, (\$5,000) Audra Morse, and **Andrew Jackson**, Fate of Representative Pharmaceutical in the Environment.
- 30. 2002-2003, Texas On-Site Wastewater Treatment Research Council. (\$200,000) Lloyd Urban, Ken Rainwater, and **Andrew Jackson**. Effects of Combining Absorbic and Evaporative Disposal Methods on Drainfield Sizing in Arid and Semiarid Areas.
- 31. 2001-2003, US Department of Agriculture (\$180,000) Phil. Smith, **Andrew Jackson**, and Todd Anderson. Risks from Food Crops Grown with Perchlorate-Contaminated Irrigation Water.

- 32. 2002-2003, NASA. (\$389,000) **Andrew Jackson**, Ken Rainwater, Audra Morse, Dean Muirhead, and Lloyd Urban. Evaluation of NASA's Advanced Life Support Integrated Water Recovery System for Non-Optimal Conditions and Terrestrial Applications. Year 2.
- 33. 2001-2003 Brazos River Authority/U.S. Army Corps of Engineers. (\$1,860,000) Todd Anderson, Phil Smith, Scott McMurry, Jim Carr, Chris Theodorakis, George Cobb, **Andrew Jackson**, and Ken Dixon. Ecological Risk Assessment of Ammonium Perchlorate on Fish, Amphibian, and Mammals in the Lake Belton and Lake Waco Watersheds: An Integrated Laboratory and Field Investigation.
- 34. 2001-2003, Texas Department of Transportation. (\$155,345) **Andrew Jackson**, Priyantha Jayawickrama, Cliff Fedler, M. Darwish, and John Borrelli. Use of Alternative Water Sources in Construction Applications.
- 35. 2001-2002, Water Resources Center. (\$12,000) **Andrew Jackson** and Audra Morse. Use of Advanced Membrane reactors for Perchlorate Degradation.
- 36. 2000-2002, NASA. (\$290,000) Lloyd Urban, **Andrew Jackson**, and Ken Rainwater. Evaluation of NASA's Advanced Life Support Integrated Water Recovery System for Non-Optimal Conditions and Terrestrial Applications.
- 37. 2000-2001, Environmental Institute of Houston. (\$15,000) Chunglong Zang, Dean Muirhead, and **Andrew Jackson.** The color of total suspended solids: A New Tool for Assessing Water Quality and Improving Environmental Education Efforts in Texas.
- 38. 2000-2001, Water Resources Center. (\$12,000) **Andrew Jackson**. Enhanced Natural Attenuation of Perchlorate in Soils Using Electrokinetic Injection.
- 39. 1999-2000, Texas Tech University Seed Grant. (\$10,000) M. Akram and **Andrew Jackson**. Modification of Wastewater Treatment Process Using Geotextiles.
- 40. 1999-2001, Water Resources Center. (\$12,000) **Andrew Jackson** and Ken Rainwater. Potential for In-Situ Remediation of Perchlorate Contamination in Sediments and Groundwater.
- 41. 1999-2000, Texas Department of Transportation. (\$165,491) Phil Nash, **Andrew Jackson**, Sanjaya Senadheera, and Jeremy Leggoe Environmental Assessment of Traditional Construction and Maintenance Materials.
- 42. 1998-1999, Water Resources Center. (\$12,000) **Andrew Jackson** and Ken Rainwater. Assessment of the Potential for Natural Attenuation of Chlorinated Solvents in Contaminated Groundwater in the Texas High Plains.
- 43. 1998-2001, Texas On-Site Wastewater Treatment Research Council. (\$300,000) Lloyd Urban, Heyward Ramsey, and Andrew Jackson. Effects of Combining Absorbic and Evaporative Disposal Methods on Drainfield Sizing in Arid and Semiarid Areas.

# Projects Below Conducted at LSU-BR

- 1997-1998, Louisiana Applied Oil Spill Research and Development Program. (\$47,000), John Pardue, **Andrew Jackson**, and Dean Adrian. Engineered Application Of Bioremediation To Oil Spills In Coastal Wetlands: A Field Trial.
- 1996-1997, Louisiana Applied Oil Spill Research and Development Program. (\$25,000), John Pardue **and Andrew Jackson**, Potential For Enhanced Anaerobic BTEX Degradation At The Blind River Spill.
- 1996-1997, Louisiana Applied Oil Spill Research and Development Program. (\$50,000), John Pardue, **Andrew Jackson**, and Dean Adrian. Engineered Application Of Bioremediation To Oil Spills In Coastal Wetlands.

#### **Publications**

Journal Articles: (Peer Reviewed) \*corresponding author; Post Doc, Graduate Student under my supervision

- Kris Zacny, Gale Paulsen, Mateusz Szczesiak, Jack Craft, Phil Chu, Chris McKay, Brian Glass, Alfonso Davila, Margarita Marinova, Wayne Pollard, Andrew Jackson (2013). LunarVader: Development and Testing of a Lunar Drill in a Vacuum Chamber and in the Lunar Analog Site of the Antarctica. *Journal of Aerospace Engineering* 26:74-86.
- 2. Margarita M. Marinovai, Christopher P. McKay, Wayne H. Pollard, Jennifer L. Heldmann, Alfonso F. Davila, Dale T. Andersen, W. Andrew Jackson, Denis Lacelle, Gale Paulson, and

- Kris Zacny. (2013) Distribution of depth to ice-cemented soils in the high-elevation Quartermain Mountains, Dry Valleys of Antarctica. *Antarctic Science* (Accepted)
- 3. Balaji Rao<sup>s</sup>, Nubia Estrada<sup>s</sup>, Shelly McGee, Jerry Mangold<sup>s</sup>, Baohua Gu, and **W. Andrew Jackson** (2012) Perchlorate Production by Photodecomposition of Aqueous Chlorine Solutions *Environ. Sci. Technol.*, 46 (21), pp 11635–11643
- 4. W. Andrew Jackson\*, A. Davila, N. Estrada\*, W.B. Lyons, J.D. Coates, and J. Priscu. (2012) Perchlorate and chlorate biogeochemistry in ice-covered lakes of the McMurdo Dry Valleys, Antarctica. *Geochemica et Cosmochimica Acta.*, 98, pp 19-30.
- 5. Tate, T. J. Pardue, and **W. Andrew Jackson\*** (2012) Bioremediation of an Experimental Oil Spill in a Coastal Louisiana Salt Marsh. *Water Air and Soil Pollution* DOI 10.1007/s11270-0929-z
- 6. Crawley, J. J., Jackson, W. A., Anderson, T. T., Song, L. F., & Morse, A. A. (2012). Evaluating RO performance with biological pretreatment of graywater. *Journal of Water Reuse and Desalination*, 2(2), 109-120.
- 7. Balaji Rao<sup>s</sup>, Suhas Mohan<sup>s</sup>, Andreas Neuber, and **W. Andrew Jacskon**\* (2012) Production of Perchlorate by Laboratory Simulated Lightning Process. *Water Air and Soil Pollution* 223:275-287
- 8. Balaji Rao<sup>s</sup>, Cameron wake, Todd Anderson, and **W. Andrew Jackson**\* (2012) Perchlorate Depositional History as Recorded in North American Ices Cores from the Eclipse Icefield, Canada, and the Upper Freemont Glacier, USA. *Water Air and Soil Pollution* 223:181-188
- 9. Karnjanapiboonwong, A., Chase, D.A., Cañas, J.E., **Jackson,** W.A., Maul, J.D., Morse, A.N., Anderson, T.A., (2011). Uptake of 17α-ethynylestradiol and triclosan in pinto bean, *Phaseolus vulgaris. Ecotoxicology and Environmental Safety* 74(2011)1336-1342
- N. Landes<sup>G</sup>, W. A. Jackson\*, and A. Morse. (2011) Limitations Encountered for the Treatment of a low C:N Waste Using a Modified Membrane-Aerated Biofilm Reactor. <u>Water Environment Research</u>., 83(2):128-139
- 11. **W. Andrew Jackson\***, J.K. Bohlke, B. Gu, P. Hatzinger, and N. Sturchio. (2010) Isotopic composition and origin of indigenous natural perchlorate and co-occurring nitrate in the southwestern United States. *Environ. Sci. Technol.*, 44(13), pp4869-4876.
- 12. Wim Vogt and W. Andrew Jackson. (2010) Perchlorate, nitrate, and iodine uptake and distribution in lettuce (Lactuca sativa L.) and potential impact on background levels in humans. J. Agric. Food Chem., 2010, 58(23), pp12192-12198.
- Benjamin C. Blount, K. Udeni Alwis, Ram B. Jain, Benjamin L. Solomon, John C. Morrow, and W. Andrew Jackson. (2010) Perchlorate, Nitrate, and Iodide Intake through Tap Water *Environ. Sci. Technol.*, 44 (24), pp 9564–9570
- B. Rao<sup>G</sup>, P. Hatzinger, J.K. Bohlke, N. Sturchio, B. Andraski, F. Eckardt, and W. Andrew Jackson\*
  (2010) Natural Chlorate in the Environment: Application of a new IC-ESI/MS/MS Method with a Cl<sup>18</sup>O-Internal Standard. *Environ. Sci. Technol.*, 44(22), pp6934-6938
- 15. B.R. Scanlon, J.B. Gates, R.C. Reedy, W.A. Jackson, and P. Bordovsky. (2010) Effects of irrigated agroecosystems: 2. Quality of soil water and groundwater in the southern High Plains, Texas. Water Resources Research. 46
- 16. Balaji Rao<sup>G</sup>, Todd A. Anderson, Aaron Redder<sup>G</sup> and W. Andrew Jackson\*. (2010) Perchlorate Formation by Ozone Oxidation of Aqueous Chlorine/Oxy-Chlorine Species: Role of Cl<sub>x</sub>O<sub>y</sub> Radicals. *Environ. Sci. Technol.*, 44 (8), pp 2961–2967.
- 17. \*Sturchio, N., M. Cafee, A. Beloso, L. Heraty, J. Bohlke, P. Hatzinger, **W. Andrew Jackson**, B Gu, J. Heikoop, and M. Dale.(2009) Chlorine 36 as a Tracer of Perchlorate Origin. . *Environ. Sci. Technol.*, 43(18): 6934–6938.
- 18. Kang<sup>p</sup>, Namgoo, Todd A. Anderson, Balaji Rao<sup>G</sup>, and **W. Andrew Jackson**\* (2009) Characteristics of Perchlorate Formation via Photodissociation of Aqueous Chlorite. *Environmental Chemistry*. 6:53:59.
- 19. **Jackson, W.Andrew**\*, Audra Morse, Eric McLamore<sup>G</sup>, Ted Wiesner, and Shu Xia (2009) Nitrification—Denitrification Biological Treatment of a High-Nitrogen Waste Stream for Water-Reuse Applications. <u>Water Environment Research</u>. 81(4):423-431.
- Rajagopolan<sup>P</sup>, Srinath, Todd Anderson, Stephen Cox, Greg Harvey, Qiuqiong Cheng, and W. Andrew Jackson\* (2009) Perchlorate in Wet Deposition Across North America. <u>Environ. Sci. Technol.</u>, 43 (3): 616–622.

- 21. \*Munster, Jennie, Gill Hanson, **W. Andrew Jackson**, and Srinath Rajagopolan<sup>P</sup>. (2009) The Fallout from Fireworks. Perchlorate in Total Deposition. *Water Air and Soil Pollution*. 198(1-4):149-153.
- 22. Scanlon\*, Bridget R. Robert C. Reedy, **W. Andrew Jackson** and Balaji Rao<sup>G</sup> (2008) Mobilization of Naturally Occurring Perchlorate Related to Land-Use Change in the Southern High Plains, Texas *Environ*. *Sci. Technol.*, 42 (23):8648–8653.
- 23. Kang<sup>P\*</sup>, Namgoo ,**W.Andrew Jackson**, Purnendu Dasgupta, and Todd Anderson. (2008) Perchlorate Production by Ozone Oxidation in Aqueous and Dry Systems. *Science of the Total Environment.*, 405:301-309.
- 24. Yu, Lu, Gopal Coimbatore, George Cobb, **W. Andrew Jackson**, Scott McMurry, Phil Smith, and Todd A. Anderson\*. (2008) Evaluation of Passive Sampling Devices as Potential Surrogates of Metal Uptake into Soybean. *Journal of Plant Nutrition*. 31(1):1-17.
- 25. Kvanli, D., M, Marisetty, S., Anderson, T.A., **Jackson, W.A.**, and Morse, A.N.\* (2008) Monitoring Estrogen Compounds in Wastewater Recycling Systems, *Water, Air, and Soil Pollution*, 188(1-4):31-40.
- 26. Cheng, QQ., Liu, FJ., Smith, PN., **Jackson, WA**., McMurray, ST., Hooper MJ., Smith EE., Blount, BC., Valentine\_Blasini L., Anderson, TA\*. (2008) Perchlorate Distribution, Excretion, and Depuration in Prairie Voles and Deer Mice. *Water Air and Soil Pollution* 192 (1-4):127-139.
- 27. Low, Darryl <sup>G</sup>, Todd Anderson, George Cobb, and **W. Andrew Jackson\*** (2008) Treatment of RDX Using Downflow Constructed Wetland Mesocosms. *Ecological Engineering* 32(2008)72-80.
- 28. Morse, Audra\*, Sukrut Khatri, and **W. Andrew Jackson**. (2008) Treatment Efficiency and Stoichiometry of a High Strength Greywater. *Water Environment Research*, 79(13):2557-2563.
- 29. Ruiz, Noel; Morse, Audra\*; Jackson, and **W. Andrew** (2008) Ammonium-nitrogen loading rates in a microporous hollow fiber membrane bioreactor. Habitation 11: 203-208
- 30. Low, Daryl\*, Morse, Audra, and **W. Andrew Jackson**. (2008). Determining the Effect of Usage and Biota Upon Oxygen Flux Across Tubular Silicone Membranes. <u>SAE 2007 Transactions Journal of Aerospace</u>, 2007-01-3092.
- 31. Landes, Nickolas <sup>G\*</sup>, **W. Andrew Jackson**, and Morse, Audra. (2008). Evaluation of a Microgravity Compatible Membrane Bioreactor for Simultaneous Nitrification/Denitrification. <u>SAE 2007 Transactions Journal of Aerospace</u>, 2007-01-3094.
- 32. Vairavan, Bala, **W. Andrew Jackson,** Green, Cary, and Audra Morse\*. (2007). Identifying the Growth Limiting Physiochemical Parameter for Gives Grown in Biologically Treated Wastewater. *Air, Water and Soil Pollution*, 184: 5-15
- 33. Padhye, Lokesh, **W. Andrew Jackson,** and Audra Morse\*. (2007) Kinetics for a Membrane Reactor Reducing Perchlorate, *Water Environment Research*, 79 (2): 140-146.
- 34. Diaz, T.\*, **W. Andrew Jackson**, and Audra Morse. (2007). Alleviating Carbon Limitations of the Early Planetary Base Wastestream. *SAE 2006 Transactions Journal of Aerospace*, March: 518-523.
- 35. McLamore, Eric\*<sup>G</sup>, **W. Andrew Jackson** and Audra Morse. (2007) Abiotic Transport in a Membrane Aerated Bioreactor. *Journal of Membrane Science*, 298 (1-2): 110-116.
- 36. Yu, L., George. Cobb, **W. Andrew Jackson**, Scott McMurry, Phil Smith, and Todd Anderson\*. (2007). Evaluation of Passive Sampling Devices as Potential Surrogates of Perchlorate Uptake into Soybean. *Water*, *Air*, & *Soil Pollution* 182(1-4):107-116.
- 37. McLamore\*<sup>G</sup>, Eric, Audra Morse, and **W. Andrew Jackson**. (2007) Bench-Scale Feed Tank Reactions in a Urine-Containing Wastestream, *HABITATION*, 11(3).
- 38. <sup>G</sup>Rao, B., Anderson, T.A., Orris, G.J., Rainwater, K.A., <sup>p</sup>Rajagopalan, S., Sandvig, R.M., Scanlon, B.R., Stonestrom, D.A., Walvoord, M.A., and **Jackson, W.A**\*. (2007). Widespread Natural Perchlorate in Unsaturated Zones of Dry Regions. *Environ. Sci. Technol.* 41(33)4487-4832.
- Cheng, QQ., Smith EE., Kirk, AB, Liu, F., Boylan, LM., McCarty, ME., Hart, S., Dong, LX., Cobb, GP, Jackson, WA., Anderson TA\*. (2007) Fatty Acid Profile in Milk from Goats, Capra aegagrus hircus, Exposed to Perchlorate and its Relationship with Perchlorate Residues in Human Milk. <u>Bulletin of Environmental Contamination and Toxicology</u>. 79(4):472-477.
- 40. Dasgupta, P.K\*., Jason Dyke, Andrea Kirk, and **W. Andrew Jackson**. (2006) Perchlorate in the United States Analysis of Relative Source Contributions to the Food Chain. <u>Environmental Science and Technology</u>. 40:21-6601-6607.
- 41. <sup>P</sup>Kang, Namgoo, T. A. Anderson, and **W. Andrew Jackson**\*. (2006) Photochemical Formation of Perchlorate from Aqueous Oxychlorine Anions. <u>Analytica Chimica Acta</u> 567:48-56 (**Invited**).

- 42. <sup>G</sup>Rajagopalan, S., T. Anderson, K. Rainwater, M. Ridley, L. Fahlquist, and **Andrew Jackson\***. (2006) Widespread Occurrence of Naturally Occurring Perchlorate in High Plains of Texas and New Mexico. Environmental Science and Technology 40:3156-3162.
- Landrum, M., J. E. Cañas, G. Coimbatore, G. P. Cobb, W. A. Jackson, B. Zhang, and T. A. Anderson\*. (2006). Effects of Perchlorate on Earthworm (Eisenia fetida) Survival and Reproductive Success. The Science of the Total Environment. 363:237-244.
- 44. Smith, Phillip\*, Scott A. Severt, **W. Andrew Jackson**, Todd A. Anderson. (2006) Thyroid Function and Reproductive Success in Rodents Exposed to Perchlorate Via Food and Water. <u>Environ Toxicol Chem</u> 25(4)1050-1059.
- 45. Dasgupta P. K\*., P. K. Martinelango G, W. A. Jackson, T. A. Anderson, K. Tian, P, R. W. Tock, S. Grajagopalan G. 2005. The Origin of Naturally Occurring Perchlorate: the Role of Atmospheric Processes. Environmental Science and Technology. 39:1569-1575. (Cover Article; 16th Most Accessed Article on ES&T Website, January-June, 2005; 12th Most Accessed Article on ES&T Website, April-June, 2006; Editor's Award for 2005 Best Environmental Science Paper).
- 46. John Karl Bohlke\*, Neil Sturchio, Baohua Gu, Juske Horita, Gilbert Brown, **W. Andrew Jackson**, Jacimaria Batista, and Paul Hatzinger. (2005) Perchlorate Isotope Forensics. <u>Analytical Chemistry</u> 77:7838-7842.
- 47. PTan, K., Todd Anderson, and **W. Andrew Jackson\*** (2005) Uptake and Exudation Behavior of Perchlorate in Smartweed. International Journal of Phytoremediation. 8(1):13-25.
- 48. <sup>G</sup>Tan, K., Todd A. Anderson, and **W. Andrew Jackson\***. (2005) Temporal and Spatial Variation of Perchlorate in Streambed Sediments: Results from In-Situ Dialysis Samplers. <u>Environmental Pollution</u>. 136/2:283-291.
- 49. **Jackson, W.A.**\*, Preethi Joseph<sup>G</sup>, Patil Laxman<sup>G</sup>, Kui Tan<sup>G</sup>, Philip N. Smith, Lu Yu, and Todd A. Anderson. (2005) Perchlorate Accumulation in Forage and Edible Vegetation. <u>Journal of Agricultural and Food Chemistry</u>. 53(2):369-373 (Ranked 18th by ISI Web of Knowledge, "Hot Papers the Last 2 Years"; Agricultural Sciences, January 8, 2006).
- 50. Rainwater, K.A\*., **Jackson, W.A.**, <sup>G</sup>Ingram, W., Lee, C.Y., Thompson, D.B., Mollhagen, T.R., Ramsey, R.H., and Urban, L.V., 2005. "Field Demonstration of the Combined Effects of Absorption and Evapotranspiration on Septic System Drainfield Capacity," <u>Water Environment Research</u>, Vol. 77, no. 2, pp. 150-161.
- 51. **Jackson, W.A.\***, L. Martino, S. Hirsh, J. Wrobel, and J. Pardue. (2005) Application of a Dialysis Sampler to Monitor phytoremediation processes. <u>Environmental Monitoring and Assessment</u>. 107(1-3)155-171.
- 52. **Jackson, W. A\***. S. Anandam<sup>G</sup>, T. A. Anderson, T. Lehman, K. Rainwater, <sup>G</sup>S. Rajagopalan, M. Ridley, and W. R. Tock. 2005. Perchlorate Occurrence in the Texas Southern High Plains Aquifer System. <u>Groundwater Monitoring and Remediation</u>. 25:1-13.
- 53. \*GMorse, A. and W. A. Jackson. (2004) Antibiotic Resistance in Three Water Reclamation Systems. Air Water and Soil Pollution. 159:277-289.
- 54. <sup>G</sup>Tan, K., **W. Andrew Jackson\***, Todd A. Anderson, and John H. Pardue. (2004) Treatment of Perchlorate-Contaminated Water in an Upflow Wetland Treatment System. <u>Water Research.</u> 38: 4173-4185.
- 55. **Jackson, W. Andrew\***, <sup>G</sup>M. Jeon, J. Pardue, and T. Anderson. (2004) Enhanced Natural Attenuation of Perchlorate in Soils Using Electrokinetic Injection. <u>Bioremediation Journal</u>. 8(1-2):65-79.
- 56. Cheng, Q., L. Perlmutter, P. N. Smith, S. T. McMurry, **W. A. Jackson**, and T. A. Anderson\*. 2004. A study on Perchlorate Exposure and Absorption in Beef Cattle. <u>Journal of Agricultural and Food Chemistry</u>. 52(11):3456-3461.
- 57. <sup>G</sup>Tan, K., Todd A. Anderson, Matthew Jones, Phillip Smith, and **W. Andrew Jackson\***. (2004) Accumulation of Perchlorate in Aquatic and Terrestrial Plants at a Field Scale. <u>Journal of Environmental Quality</u>. 33:1638-1646.
- 58. <sup>G\*</sup>Morse, A. and **W. A. Jackson**. (2004) Fate of Amoxicillin in Two Water Reclamation Systems. <u>Air Water and Soil Pollution</u>. 157:117-132.
- 59. **Jackson\*W. Andrew**, Tock, R, S. Arunageri<sup>G</sup>, T. Anderson, and K. Rainwater. (2004) Electrochemical Generation of Perchlorate in Municipal Drinking Water Systems. <u>Journal of AWWA</u>. 96(7):103-108.
- 60. Tock, R. W\*., **Jackson, A**., Anderson, T. and <sup>G</sup>Arunagiri S., (2004) "Electrochemical Generation of Perchlorate Ions in Chlorinated Drinking Water", <u>The Journal of Science and Engineering Corrosion</u>, 60(8):757-764.

- 61. Yu, L., J.E. Cãnas; G.P. Cobb; **W.A. Jackson**; and T.A. Anderson\*. (2004) Uptake of Perchlorate in Terrestrial Plants. Ecotoxicology and Environmental Safety 58:44-49.
- 62. <sup>G</sup>Tan, K., T.A. Anderson and **W.A. Jackson\***. (2004) Degradation Kinetics of Perchlorate in Sediments and Soils. Water, Air, and Soil Pollution. 151:245-259.
- 63. Shin, W.S\*., J.H. Pardue, **W.A. Jackson**, S.J. Choi. (2001) Nutrient Enhanced Biodegradation of Crude Oil in Tropical Salt Marshes. <u>Water Air and Soil Pollution</u> 131: 135-152.
- 64. Shin, W. S\*., J.H. Pardue, and **W.A. Jackson**, (2000) Oxygen Demand and Sulfate Reduction in Petroleum Hydrocarbon Contaminated Salt Marsh Soils. Water Research 34:1345-1353.
- 65. Rabbi, M., B. R. G. Clark, E. Ozsu-Acar, J. Pardue, and **W. A. Jackson**. (2000) *in situ* TCE Bioremediation Study Using Electrokinetic Cometabolic Injection. <u>Waste Management</u> 20:279-286.
- **66.** \*Jackson W. A., and J. Pardue. (1999) Quantifying the Mineralization of Contaminants Using Stable Carbon Isotope Ratios, <u>Organic Geochemistry</u> 30:787-792.
- **67.** \*Jackson, W. A., and J. Pardue. (1999) Potential for Intrinsic and Enhanced Crude Oil Degradation in Louisiana's Fresh Marshes. Wetlands 19(1):28-34.
- **68.** \*Jackson, W. A., and J. Pardue. (1999) Potential for enhancement of biodegradation of crude oil in Louisiana salt marshes using nutrient amendments. Water Soil and Air Pollution 109:343-355.
- **69.** \*Jackson, W. A., Kommalapati, R., R.D. Pardue, J. Pardue, (1998) Effect of Anionic Colloidal Gas Aphrons on the Transport of Bacteria Through a Soil Matrix. <u>Journal of Environmental Science and Health</u>. A33:369-384.
- **70.** \*Jackson, W. A., and J. Pardue. (1998) Assessment of Metal Inhibition of Reductive Dechlorination of Hexachlorobenzene at a Superfund Site. Environmental Toxicology and Chemistry 17(8):1441-1446.
- 71. \*Jackson, W. A., and J. Pardue. (1997) Seasonal Variability of Crude Oil Respiration Potential in Salt and Fresh Marshes. Journal of Environmental Quality 26:1140-1146.
- 72. \*Jackson, W. A., J. Pardue, and R. Arujo. (1996) Monitoring Crude Oil Respiration in Salt Marshes; Use of Stable Carbon Isotope Ratios. Environmental Science and Technology 30 (4):1139-1144.
- 73. \*Jackson, W. A. and D. Roy. 1994, Transport of a Bacterial Suspension Through a Soil Matrix Using Water and an Anionic Surfactant, Water Research 28: (4):943-949.

# **Book Chapters**

- 1. Sturchio NC, Böhlke JK, Gu B, Hatzinger PB, **Jackson WA**, (2011). Isotopic tracing of perchlorate in the environment. In: Baskaran M (Ed.), Handbook of Environmental Isotope Geochemistry, Springer-Verlag.
- 2. Gu, B., Böhlke, J.K., Sturchio, N.C., Hatzinger, P.B., **Jackson, W.A.**, Beloso, A.D., Heraty, L.J., Bian, Y., Jiang, X., and Brown, G.M. (2011) Applications of selective ion exchange for perchlorate removal, recovery, and environmental forensics. in SenGupta, A. K., ed., Ion Exchange and Solvent Extraction: A Series of Advances: 20. Taylor & Francis.
- J. Coates and W.A. Jackson (2009) Development of *In Situ* Bioremediation Technologies for Perchlorate in <u>In Situ Bioremediation of Perchlorate in Groundwater</u>. Hans F. Stroo and Herb Ward, (Eds.) 2009, XLVI, PP. 29-53
- W. Andrew Jackson, Todd Anderson, Greg Harvey, Greta Orris, Srinath Rajagopalan, and Namgoo Kang. (2006). Occurrence and Formation of Non-Anthropogenic Perchlorate. In Baohua Gu and John Coates (eds). Perchlorate Environmental Occurrence, Chemistry, Toxicology, and Remediation Technologies. Springer-Kluwer. PP 49-70.
- 6. **W. Andrew Jackson,** Todd A. Anderson, Jaclyn E. Canas, Shane Snyder, and Kui Tan, (2006). Environmental Fate of Perchlorate. In Ron Kendall and Phil Smith (eds). <u>Perchlorate Ecotoxicology</u>. Society of Environmental Toxicology and Chemistry Press. PP.1-20.
- 7. Kevin P. Mayer, **W. Andrew Jackson**, Shane A. Snyder, Philip N. Smith, Todd A. Anderson, (2006). State of the Science: Background, History, & Occurrence. In Ron Kendall and Phil Smith (eds). <a href="Perchlorate Ecotoxicology">Perchlorate Ecotoxicology</a>. Society of Environmental Toxicology and Chemistry Press. PP 21-35.

## **Peer Reviewed Proceedings**

- Kyle Kubista, W. Andrew Jackson, and A. Morse. Comprehensive Trade study of Biological Systems for Primary Treatment in an Integrated Water Processing System. Proceedings of the 42<sup>nd</sup> International Conference on Environmental Systems, AIAA-2012-3401, San Diego, Ca.
- Audra Morse, Tony Vercellino, Dylan Christenson, Stephen Morse, Kyle Kubista<sup>s</sup>, Dannia Wilson<sup>s</sup> and W. Andrew Jackson. Biological Pre-Treatment of a Space Based Waste Stream to Improve Distillation
  Treatment Efficiency. Proceedings of the 41<sup>st</sup> International Conference on Environmental Systems, AIAA-2011-5146-6239, Portland, Oregon.
- 3. W. Andrew Jackson, Dylan Christenson, Kyle Kubista<sup>s</sup>, Audra Morse, Stephen Morse, Tony Vercellino, and Dannia Wilson<sup>s</sup>. Performance of a TRL 5 Bioreactor for Pretreatment of an Extended Habitation Wastestream. Proceedings of the 41<sup>st</sup> International Conference on Environmental Systems, AIAA-2011-5132, Portland, Oregon.
- 4. Tony Vercellino, **W. Andrew Jackson**, Dylan Christenson, Kyle Kubista<sup>s</sup>, Audra Morse, Stephen Morse, and Dannia Wilson<sup>s</sup>. Biological and Physical Polishing of a Space Based Waste Stream. Proceedings of the 41<sup>st</sup> International Conference on Environmental Systems, AIAA-2011-5144, Portland, Oregon.
- 5. Landes, N, **Jackson WA**, Morse A. 2011. Nitrite Looping: Plausible Phenomenon or Mathematical Nuance? Proceedings of the water Environment Federation, WEFTEC 2011: Session 51-60, pp 3219-3233(15)
- W.A. Jackson, K. Peterson, A. Morse, and N. Landes (2010). "Development and Testing of a TRL 5 Bioreactor for Pretreatment of a Lunar Surface Wastestream" 40<sup>th</sup> International Conference on Environmental Systems, AIAA-2010-6239, Barcelona, Spain.
- 7. A. Morse, W. A. Jackson, D. Wilson, F. Loko, K. Peterson. (2010). "Evaluation of Alternative Urine Pre-Treatment Strategies" 40<sup>th</sup> International Conference on Environmental Systems, AIAA-2010-6096, AIAA, Barcelona, Spain.
- W.A. Jackson, N. Landes, D. Low and A. Morse (2009). "An Optimum Biological Reactor Configuration for Water Recycling in Space" International Conference on Environmental Systems, 2009-09-0049, Society of Automotive Engineers, Savannah, GA
- 9. Landes, N., **W.A. Jackson** and A. Morse (2008). "The Analysis of a Modified Membrane-Aerated Biofilm Reactor for Space Flight Applications" International Conference on Environmental Systems, 2008-01-2016, Society of Automotive Engineers, San Francisco, CA.
- Low, Darryl, W. A. Jackson, and A. Morse. (2007) Determining the Effect of Usage and Biota Upon Oxygen Flux Across Tubular Silicone Membranes. Paper 2006-01-3092 International Conference on Environmental System, Chicago, IL.
- Ruiz, N., W. A. Jackson, and A. Morse. (2007) Transport Processes within a Hollow Fiber Membrane Reactor: Mass Transfer and Hydrodynamics. Paper 2007-01-3093 International Conference on Environmental System, Chicago, IL.
- 12. Landes. N, **W. A. Jackson,** and A. Morse. (2007) Evaluation of a Microgravity Compatible Membrane Bioreactor for Simultaneous Nitrification/Denitrification. Paper 2007-01-3094 *International Conference on Environmental System, Chicago, IL.*
- 13. Diaz, T., W. A. Jackson, and A. Morse (2006) Alleviating Carbon Limitations of the Early Planetary Base Wastestream. Paper 2006-01-2887. *International Conference on Environmental Systems (ICES), Norfolk, VA.*
- 14. **Jackson, W. Andrew** and Audra Morse (2005). Optimum Loading Rates and Design Limitations of Biological Reactors for Long-Term Space Habitation Waste Streams. SAE Paper Number ICES 2005-01-2979, 35<sup>th</sup> International Conference on Environmental Systems (ICES), Rome, Italy..
- 15. Vairavan, Bala, Audra Morse, and W. Andrew Jackson, and Cary Green (2005) Chive Growth in Biologically Treated Early Planetary Base Wastewater. SAE Paper Number ICES 2005-01-2822, 35<sup>th</sup> International Conference on Environmental Systems (ICES), Rome, Italy..
- 16. McLamore, Eric, Audra Morse, and W. Andrew Jackson (2004) Incorporation of a membrane-Aerated Bioreactor in a Water Recovery System. SAE Paper Number ICES 2004-1-2461, 34<sup>th</sup> International Conference on Environmental Systems (ICES), Colorado Springs, CO.

- 17. Morse, Audra, S. Karparthi, and **W. Andrew Jackson (2004)** Biological Treatment of a Urine Humidity Condensate Waste Stream. SAE Paper Number ICES 2004-1-2462, 34<sup>th</sup> International Conference on Environmental Systems (ICES), Colorado Springs, CO
- 18. Wiesner, Theodore, Shu Xia, and W. Andrew Jackson (2004) Modeling a Biological Closed Loop Water Recycling System for Prolonged Manned Space Flight. SAE Paper Number ICES 2004-1-2511, 34<sup>th</sup> International Conference on Environmental Systems (ICES), Colorado Springs, CO
- 19. Jackson, W. Andrew, Audra Morse, Tania Ho, and Greg Collins(2004) Effect of Recycle Ratio on the Performance of Biological Water Recovery System. SAE Paper Number ICES 2004-1-2511, 34<sup>th</sup> International Conference on Environmental Systems (ICES), Colorado Springs, CO.
- 20. Rector, T., W. A. Jackson, K. Rainwater, and K. Pickering. (2003) Determination of the Fate and Behavior of a Commercial Surfactant in a Water Recycle System (WRS). SAE Paper Number 2003-01-2558, 33<sup>rd</sup> International Conference on Environmental Systems (ICES), Vancouver, BC.
- 21. Begeer, A., **W. A. Jackson**, and Audra Morse. (2003) Biologically Treated Wastewater for NFT Plant Production in Space. SAE Paper Number 2003-01-2681, 33<sup>rd</sup> International Conference on Environmental Systems (ICES), Vancouver, BC.
- 22. Morse, A., **W.A. Jackson**, K. Rainwater. (2003) Nitrification Using a Membrane-Aerated Biological Reactor. SAE Paper Number 2003-01-2559, 33<sup>rd</sup> International Conference on Environmental Systems (ICES), Vancouver, BC.
- 23. Muirhead, D., T. Rector, W.A. Jackson, H. Keister, A. Morse, K. Rainwater, and K. Pickering. (2003) Performance of a Small Scale Biological Water Recovery System. SAE Paper Number 2003-01-2557, 33<sup>rd</sup> International Conference on Environmental Systems (ICES), Vancouver, BC
- **24. Jackson W.A.**, K. Tan, T. Anderson. (2003) Distribution, Degradation, and Uptake of Perchlorate in Contaminated Sediments. *Proceedings of the 7<sup>th</sup> International Conference on In Situ and On-Site Bioremediation, Baltimore Md.*
- **25.** Tan, K., W. **A. Jackson**, and T. Anderson. (2003) Degradation of Perchlorate-Contaminated Water Using Wetland Treatment Systems. *Proceedings of the 7<sup>th</sup> International Conference on In Situ and On-Site Bioremediation, Baltimore Md.*
- 26. Tock, R., **W.A. Jackson**, K. Rainwater, and T. Anderson. (2003) Potential for Perchlorate Generation in Drinking Water Storage Tanks, *Proceedings of Texas Water*. Corpus Christi, TX.
- 27. **Jackson, W. A.**, M. Jeon, J. Pardue, and T. Anderson. (2001) Enhanced Natural Attenuation of Perchlorate in Soils Using Electrokinetic Injection. *Proceedings of the 6<sup>th</sup> International Conference on In Situ and On-Site Bioremediation*. 6(5:)207.
- **28.** Pardue, J., E. Lee, W. Shin, **W.A. Jackson** (2001) Anaerobic Biodegradation of Crude Oil in Salt Marshes. *Proceedings of the 6<sup>th</sup> International Conference on In Situ and On-Site Bioremediation.6*(5):313-320.
- 29. Pardue, J., **W. A. Jackson**, L. Martino, J. Wrobel, S. Hirsh. (2001) Application of a Dialysis Sampler to Monitor Phytoremediation Processes. *Proceedings of the 6<sup>th</sup> International Conference on In Situ and On-Site Bioremediation*. *6*(9):273.
- 30. Shin, W.S., P. Tate, W.A. Jackson, and J. Pardue. (2000) Bioremediation of an oil spill in a salt marsh. *Proceedings of the Second International Conference on Wetlands and Remediation: An international Conference*, pp. 33-402
- 31. **Jackson, W. A.**, J. Pardue, G. Nemeth, T. DeReamer, D. McInnis and D. Green. (1999) Optimization Strategy for Enhancing Biodegradation in an Upland-Wetland Plume. In, Bioremediation and Phytoremediation of Chlorinated and Recalcitrant Compounds. *Proceedings*, 2<sup>nd</sup> International Conference on Remediation of Chlorinated and Recalcitrant Compounds, pp. 279-286.
- **32.** Pardue, J., **A. Jackson**, and C. Clover (1998) Natural Attenuation of Organics at the Petro Processors, Inc. Superfund Site: Potential for Metal Inhibition and Complete Anaerobic Degradation. *Proceedings WEFTEC 1998 71<sup>st</sup> Annual Conference and Exposition*, Orlando, Fl. (3)109-123.
- 33. **Jackson**, A., J. Pardue. (1998) Assessment of Heavy Metal Inhibition of Reductive Dechlorination of Hexachlorobenzene. *International Conference on Remediation of Chlorinated and Recalcitrant Compounds*, Ed. Wickramanayake, G.B. and Hinchee, R., Vol C1-3:63-68 Monterey CA.
- 34. Pardue, J., **A. Jackson**, R. Gale, M. Rabbi, B. Clark, and E. Acar, (1998) Electrokinetics as a Supporting Technology for In Situ TCE Biodegradation. *International Conference on Remediation of Chlorinated and Recalcitrant Compound.*, Ed. Wickramanayake, G.B. and Hinchee, R., V. C1-5:461-465.

- 35. Trail, K., W. A. Jackson, J. Pardue, D. Constant, and D. McInnis, (1998) Attenuation of PCE: Induced Anoxic Versus Existing Oxic Conditions. *International Conference on Remediation of Chlorinated and Recalcitrant Compounds*, Ed. Wickramanayake, G.B. and Hinchee, R., V. C1-3:69-73.
- 36. Clover, C., W. A. Jackson, and J. Pardue, (1998) Natural Attenuation of Mono- and Dichlorobenzenes in Anaerobic Surface Sediments at the Petro Processors Site. *International Conference on Remediation of Chlorinated and Recalcitrant Compounds*, Ed. Wickramanayake, G.B. and Hinchee, R., V. C1-3:75-80.
- 37. **Jackson, W.A.** and J. Pardue. (1997) *Proceedings of the WERC/HSRC Joint conference on the environment*. Biostimulation and Natural Attenuation of Crude Oil in Gulf Coast Salt marshes: 289-293.
- **38. Jackson, W.A.** and J. Pardue. (1995) Monitoring Crude Oil Mineralization in Salt Marshes: Use of Stable Carbon Isotope Ratios. *Symposium on Bioremediation of Hazardous Wastes: Research Development and Field Evaluations*. EPA/600/R-95/076 (73-76).

#### Reports

- 1. Jayawickrama, P., Jackson, A., Fedler, C., Morse, A., Rajagopalan. (2005) Use of Alternative Water Sources, Center for Multidisciplinary Research in Transportation, Texas Tech University, Research Report 0-4412-1
- Malina, J., Barrett, M., Jackson, A. and Kramer, T. (2005) Characterization of Stormwater Runoff From a Bridge Deck and Approach Highway, Effects on Receiving Quality, Texas Tech University, Research Report 0-4543-1.
- 3. Morse, A., Jackson, A., Rainwater, K., Anderson, T., Weisner, T., McLamore, E., Collins, G. Kvanli, D., and Ho, T. (2003) Evaluation of NASA's Advanced Life Support Integrated Water Recovery System for Non-Optimal Conditions and Terrestrial Applications, NASA, 2002-2003 (Year 3).
- Morse, A. and Jackson, A. (2003) Fate of a Representative Pharmaceutical in the Environment, Texas Water Resources Institute.
- Morse, A., Jackson, A., Nash, P. and Senadheera, S. (2001) Environmental Characterization of Traditional Construction and Maintenance Materials, Center for Multidisciplinary Research in Transportation, Texas Tech University, Research Report 4974-1.
- 6. Rainwater, K.A., Jackson, W.A., Ingram, W., Lee, C.Y., Thompson, D.B., Mollhagen, T.R., Ramsey, R.H., and Urban, L.V., (2001) "Effects of Combining Absorbic and Evaporative Disposal Methods on Drainfield Sizing in Arid and Semiarid Areas," Final Report to Texas On-Site Wastewater Disposal Research Council, Texas Commission on Environmental Quality, Austin, TX, 119 p.
- 7. Waghdhare, N., Rainwater, K.A., and Jackson, W.A., (2003) "Numerical Simulation of Unsaturated Flow Near a Septic System Drainfield," Final Report to Texas On-Site Wastewater Disposal Research Council, Texas Commission on Environmental Quality, Austin, Texas, 323 p.
- 8. Rainwater, K.A. and Jackson, W.A., (2004) "Evaluation of Drainfield Absorption and Evapotranspiration Capacity," Final Report to Texas On-Site Wastewater Disposal Research Council, Texas Commission on Environmental Quality, Austin, Texas, 74 p.

## **Presentations (Invited\*)**

- \*W. Andrew Jackson, Dylan Christenson, and Audra Morse. (2012) Recycling of Space Habitation Waste Streams Using Micro-Gravity Compatible Biological Reactors. Association of Gravitational Space Research. New Orleans
- 2. **W. Andrew Jackson**, Kyle Kubista, and Audra Morse. (2012) *Comprehensive Trade study of Biological Systems for Primary Treatment in an Integrated Water Processing System*. Proceedings of the 42<sup>nd</sup> International Conference on Environmental Systems, San Diego, Ca.
- 3. Yu-Yan Sara Zhao, Scott M. McLennan, Andrew W. Jack-son, Suniti Karunatillake. (2013) Photochemical effects on bromine and chlorine distributions during brine evaporation on the martian surface. Lunar and Planetary Science Conference in Houston (Mar 18-22, 2013).
- 4. Kyle Kubista, **W. Andrew Jackson**, and A. Morse. *Comprehensive Trade study of Biological Systems for Primary Treatment in an Integrated Water Processing System*. Proceedings of the 42<sup>nd</sup> International Conference on Environmental Systems, AIAA-2012-3401, San Diego, Ca.

- Andrew Jackson, Balaji Rao, Bahua Gu, J.K. Bohlke, Alfonso Davila, and Mark Clair. (2012)
   Distribution and stable isotopic composition of ClO<sub>4</sub> in the Atacama Desert. Goldschmidt 2012, Montreal CA.
- 6. Armen Pohosyan, Neil Sturchio, Yunbin Guan, John Eiler, and **Andrew Jackson**. (2012) Perchlorate in the Great Lakes: isotopic composition and origin. Goldschmidt 2012, Montreal CA.
- Audra Morse, Tony Vercellino, Dylan Christenson, Stephen Morse, Kyle Kubista<sup>s</sup>, Dannia Wilson<sup>s</sup> and W.
   Andrew Jackson. (2011) Biological Pre-Treatment of a Space Based Waste Stream to Improve Distillation Treatment Efficiency. 41<sup>st</sup> International Conference on Environmental Systems, 2011 Portland, Oregon.
- 8. **W. Andrew Jackson**, Dylan Christenson, Kyle Kubista<sup>s</sup>, Audra Morse, Stephen Morse, Tony Vercellino, and Dannia Wilson<sup>s</sup>. (2011) Performance of a TRL 5 Bioreactor for Pretreatment of an Extended Habitation Wastestream. 41<sup>st</sup> International Conference on Environmental Systems, 2011 Portland, Oregon.
- Tony Vercellino, W. Andrew Jackson, Dylan Christenson, Kyle Kubista<sup>s</sup>, Audra Morse, Stephen Morse, and Dannia Wilson<sup>s</sup>. (2011) Biological and Physical Polishing of a Space Based Waste Stream. 41<sup>st</sup>
  International Conference on Environmental Systems, 2011 Portland, Oregon.
- W. Andrew Jackson, J.K. Bohlke, B. Gu, P. Hatzinger, and N. Sturchio. (2011) Isotope Determination of Perchlorate Sources in the Environment: Role of Indigenous Perchlorate. Battelle Bioremediation Symposium 2011. Reno, Nevada.
- 11. W. Andrew Jackson, T. Tate, and J. Pardue. (2011) Crude oil biodegradation in *Spartina alterniflora* dominated salt marshes. SETAC Gulf Oil Spill, Pensacola Beach, Fl.
- 12. **A. Jackson,** B. Rao<sup>s</sup>, J.K. Bohlke, B. Gu, P.B. Hatzinger, B. Rao, and N.C. Sturchio. J. Betancourt, B. Andraski, D. Stonestrom, G. Orris, F. Eckardt. (2010) Relation between NO<sub>3</sub> and ClO<sub>4</sub> Occurrence in the Environment. Goldschmidt 2010, Knoxville, TN.
- 13. B. Rao<sup>s</sup>, **A. Jackson**, J.K. Bohlke, B. Gu, P.B. Hatzinger, B. Rao, and N.C. Sturchio. (2010) Understanding Natural Perchlorate Formation by Ozone and UV-oxidation of Aqueous Cl species. Goldschmidt 2010, Knoxville, TN.
- 14. B. Andraski, **A. Jackson**, D. Stonestrom, and T. Welborn. (2010) Factors Affecting the Distribution of Natural Perchlorate in Desert Soils. Goldschmidt 2010, Knoxville, TN.
- 15. J.K Bohlke, A. Jackson, P. Hatzinger, N. Sturchio, B. Gu. (2010) Isotopic Variation in Terrestrial Perchlorate and Associated Nitrate. Goldschmidt 2010, Knoxville, TN.
- 16. P.B. Hatzinger, N.C. Sturchio, J.K. Bohlke, **A. Jackson**, and B. Gu. (2010) Isotopic Fractionation Resulting from Biodegradation of Perchlorate. *Remediation of Chlorinated and Recalcitrant Compounds Sixth International Conference*. Monterey, CA
- 17. **A. Jackson**, J.K. Bohlke, B. Gu, P.B. Hatzinger, B. Rao, and N.C. Sturchio. (2010) Stable Isotopic Signature of Natural Perchlorate: Implications to Site Assessment. *Remediation of Chlorinated and Recalcitrant Compounds Sixth International Conference*. Monterey, CA
- 18. J.K Bohlke, S. Mroczkowski, P. Hatzinger, N. Sturchio, L. Heraty, A. Beloso, B. Gu, A. Jackson, and B. Rao. (2010) Determination of Perchlorate Sources in Groundwater: Case Studies from Different Regions in the US. *Remediation of Chlorinated and Recalcitrant Compounds Sixth International Conference*. Monterey, C
- 19. **Jackson, W.A.** and D. Reible. (2009) The Use of Spatially Discrete Passive Samplers to Simultaneously Evaluate Hydrophobic Organics and Biogeochemical Processes in Dynamic Systems 3<sup>rd</sup> International Passive Sampling Workshop and Symposium (IPSW 2009). Prague, Czech Republic.
- 20. \*Jackson, W. A. (2009) Perchlorate in Atmospheric Deposition. 21 st International Ion Chromatography Symposium, Dublin. Ireland.
- 21. \*Jackson, W. A. and Greta Orris. (2009) Occurrence of perchlorate across the world and the implication for human health impact. *American Chemical Society Fall Meeting*, Washington D.C.
- 22. **Jackson W.A.**, S. Sanka, and T. Anderson. (2009) RDX Fate in Saturated Surface Sediments: Biological Transformation and Plant Uptake. *American Chemical Society Spring Meeting*, Salt Lake City, Utah.
- 23. **Jackson W.A.** and B. Scanlon. (2009) The Occurrence of Natural Perchlorate and its Implications to Human Exposure. *Environmental protection Agency Region 6*, Dallas, TX.
- 24. **Jackson, W.** A. and S. Rajagopolan. (2008) "Perchlorate Deposition in Wet Precipitation across North America". *National Atmospheric Deposition Program Fall Meeting*, Madison WI.

- 25. \*Jackson, W. A. (2008) Partners in Environmental Technology Technical Symposium and Workshop Short Course "In Situ Bioremediation of Perchlorate in Groundwater". Washington D.C.
- 26. \*W. Andrew Jackson, Balaji Rao, Todd A. Anderson, Greta J. Orris, Ken A. Rainwater, Srinath Rajagopalan, Renee M. Sandvig, Bridget R. Scanlon, David A. Stonestrom, Michelle A. Walvoord, Greg Harvey, Lynne Fahlquist, and Brian Andraski (2008) Background Concentrations of Perchlorate in Arid and Semi-Arid Regions of North America and its Impact on Site Assessment. *International Conference on Remediation of Chlorinated and Recalcitrant Compounds Sixth International Conference*. Monterey, CA.
- 27. Scanlon, B.R., Reedy, R.C., **Jackson, W.A.**, and Rao, B. (2007) Perchlorate Mobilization Related to Land Use Change in the Southern High Plains, USA, *EOS Trans. AGU*, 88(52) Fall Meet. Suppl., Abstract H33E-1692.
- 28. Rajagopalan, S., **Jackson, W.A.**, and T. Anderson (2007) Wet Deposition Over the Continental United States, *EOS Trans. AGU*, 88(52) Fall Meet. Suppl., Abstract H41K-03.
- \*Harvey, G., Orris, G., Jackson, W.A., Rajagopolan, S., Anraski, and B., Stonestrom, D. (2007)
   Widespread Occurrence of Plant Perchlorate, EOS Trans. AGU, 88(52) Fall Meet. Suppl., Abstract H41K-01
- 30. \*Bohlke, J., Hatzinger, P.B., Sturchio, N.C. Gu, B., **Jackson W.A.**, and Abbene, IJ. (2007) Isotopic Discrimination of Perchlorate Sources in Ground Water, *EOS Trans. AGU*, 88(52) Fall Meet. Suppl., Abstract H41K-05.
- 31. Andraski, B., Stonestrom, D., Jackson, W.A., Rajagopalan, S., and Taylor, E.M. (2007) Systematics of Natural Perchlorate in Precipitation, Soils, and Plants at the Amargosa Desert Research Site, Nye County, Nevada, *EOS Trans. AGU*, 88(52) Fall Meet. Suppl., Abstract H33E-1691.
- 32. Fahlquist, L, Rajagopalan, S., and **Jackson, W.A**.. (2007) Perchlorate in the San Antonio Segment of the Edwards Aquifer, Texas, *EOS Trans. AGU*, 88(52) Fall Meet. Suppl., Abstract H33E-1693.
- 33. Munster, JE, Hanson, GN and **Jackson, WA**. (2007) Perchlorate in Turfgrass Systems, Suffolk County, Long Island, NY, *EOS Trans. AGU*, 88(52) Fall Meet. Suppl., Abstract H41K-07.
- 34. Rao, B., Kang, N., Redder, A, and **Jackson, W.A**. (2007) Formation Of Perchlorate By Ozonation Of Aqueous Oxy-chlorine Anions: An Insight To Natural Perchlorate Formation, *EOS Trans. AGU*, 88(52) Fall Meet. Suppl., Abstract H33E-1686.
- 35. Jackson, WA, Anderson, TA, Orris, GJ, Bohlke, JK, and Rajagopalan, S. (2007) Enriched Perchlorate and Relationship with Other Major Anions in Atmospherically Derived Deposits of Nitrate of the Mojave Desert, *EOS Trans. AGU*, 88(52) Fall Meet. Suppl., Abstract H33E-1690.
- 36. **Jackson, W.A.**,S. Rajagopolan, B. Rao, T. Anderson, G. Orris, and G. Harvey. (2007) The Occurrence of Natural Perchlorate and its Implications for Exposure, *Society of Environmental Toxicology and Chemistry* 28<sup>th</sup> Annual Meeting, Milwaukee, WI; November 11-15.
- 37. Rajagopalan, S., **Jackson, W.A**., and T. Anderson (2007) "Perchlorate in the Root Zones of Arid and Semi-Arid Regions Across the World, *Society of Environmental Toxicology and Chemistry 28<sup>th</sup> Annual Meeting*, Milwaukee, WI; November 11-15.
- 38. Rajagopalan, S., **Jackson, W.A.**, and T. Anderson (2007) Solid Phase Micro-Extraction for Measuring PoreWater Concentrations of Organic Contaminants. *Society of Environmental Toxicology and Chemistry* 28<sup>th</sup> Annual Meeting, Milwaukee, WI; November 11-15.
- 39. W. A. Jackson, T. Anderson, T. Johnson, and C. Kiehl-Simpson . (2007) A Comparison of Diffusion Sampler Equilibration Rates Using Teflon and Tuffryn Membranes." *Society of Environmental Toxicology and Chemistry* 28<sup>th</sup> Annual Meeting, Milwaukee, WI; November 11-15.
- 40. Kang, N., Anderson, T. A., Jackson, W. A., (2006) Perchlorate Formation via Heterogeneous Catalytic Ozone Reactions on Chloride Coated Sand, Published Extended Abstracts of the 232<sup>nd</sup> ACS National Meeting, Environmental Chemistry Division, San Francisco, CA, September 10..
- 41. Rao, B.A., Stonestrom, D.A., Anderson, T.A., Orris, G.J., Rajagopalan, S., Sandvig, R.M., Scanlon, B.R., Walvoord, M.A., and Jackson, W.A., (2006) A Reservoir of Natural Perchlorate in Unsaturated Zones of Arid and Semi-Arid Regions, Southwestern USA [abs.]: Eos, Transactions, AGU, Fall Meeting Suppl., v. 87, no. 52, p. F849.
- 42. *Kang, N.*, Dasgupta, P. K., Anderson, T. A., **Jackson, W. A**. (2006) "Photochemical Mechanisms of Perchlorate Formation from Aqueous Inorganic Oxychlorine Precursors," Published Extended Abstracts of the 231st *ACS National Meeting*, Environmental Chemistry Division, Atlanta, Georgia, March 26.

- 43. Rajagopalan, S., **Jackson, W.A.**, Anderson, T.A., Harlin, K., and Kang, N. (2006) Perchlorate Deposition in Precipitation in the Continental United States and Selected Northern hemisphere Locations. ACS National Meeting, (Sept 10- 14, San Francisco, CA.
- 44. \*Jackson, W.A.,S. Rajagopolan, B. Rao, T. Anderson, K. Rainwater, D. Stonestrom, L. Fahlquist, G. Orris, and G. Harvey. (2006) Occurrence of Atmospherically Generated Perchlorate in Arid and Semi-Arid Regions of North America., The 16<sup>th</sup> Symposium in GRA's Series on Groundwater Contaminants, Perchlorate 2006 Santa Clara CA. January26..
- 45. Kang, Namgoo, W. Andrew Jackson, Todd Anderson, and Purnendu Dasgupta. (2005) Probing the Origins of Natural Perchlorate. Geologic Society of America Annual Conference. Salt Lake City, UT. October 16-19.
- 46. John Karl Bohlke, Neil Sturchio, Baohua Gu, Juske Horita, Gilbert Brown, W. Andrew Jackson, Jacimaria Batista, and Paul Hatzinger. (2005)Isotopic Identification of Natural and Anthroprogenic Perchlorate and Nitrate in Groundwater.. Geologic Society of America Annual Conference. Salt Lake City, UT,, October 16-19.
- 47. **W. Andrew Jackson** and David Stonestrom. (2005) Sources and Occurrences of Non-Anthroprogenic Perchlorate. Geologic Society of America Annual Conference. Salt Lake City, Utah. October 16-19.
- 48. \*W. Andrew Jackson (2005) Electrochemical Generation of Perchlorate Ions in Chlorinated Drinking Water. International Society of Environmental Forensics: Focus on Perchlorate, September 21-22, Santa Fe. NM.
- 49. \*W. Andrew Jackson (2005) Using Multiple Approaches to Determine the Source of Perchlorate and Associated Challenges for Widespread Low Level Occurrences. *International Society of Environmental Forensics: Focus on Perchlorate, September 21-22, Santa Fe, NM.*
- 50. Morse, A., **Jackson, W.A.**, and Khatri, S. (2006) Stoichiometry of the Transit Mission Wastewater, ASCE Earth and Space, March, Houston, TX.
- 51. Morse, A. and **Jackson, W.A**, (2006) Treatment of an Early Planetary Base Wastewater using a Dual Nitrification-Denitrification Reactor, Habitatio, Rosen Hotel, Orlando, FL, February 5-8.
- 52. \*W. Andrew Jackson (2005) Critical Limitations and Potential Solutions for Using Biological Reactors in Closed Loop Microgravity Compatible Water Recycling Systems. *Gordon Research Conference Engineering Sciences for Space Exploration, August 21-26, Les Diablerets, Switzerland.*
- 53. **W. Andrew Jackson** and Audra Morse. (2005) Optimum Loading Rates and Design Limitations of Biological Reactors for Long-Term Space Habitation Waste Streams. 35<sup>th</sup> International Conference on Environmental Systems (ICES), Rome, Italy.
- 54. Bala Vairavan, Audra Morse, **W. Andrew Jackson**, and Cary Green. (2005) Chive Growth in Biologically Treated Early Planetary Base Wastewater. 35<sup>th</sup> International Conference on Environmental Systems (ICES), Rome, Italy.
- 55. K. Tan, W. A. Jackson, C. Theodorakis, and T. Anderson, (2005) Degradation of RDX in Constructed Wetland Mesocosms. The Eighth International In Situ and On Site Bioremediation Symposium. June 6-9<sup>th</sup> Baltimore, MD
- 56. \*Jackson, W.A., (2005) Perchlorate Origin and Occurrence in West Texas" Texas Commission on Environmental Quality Environmental Trade Fair and Conference. Austin TX, May 2.
- 57. \*Jackson, W.A., G. Harvey, and G. Orris. (2004) Origin and Production of Naturally Occurring Perchlorate. SERDP Partners in Environmental Technology. Washington, D.C. November 30.
- 58. Jackson, W.A., K. Tan, C. Theodorikas, and T. Anderson (2004) Treatment of Perchlorate in Constructed Wetlands. Origin and Production of Naturally Occurring Perchlorate. SERDP Partners in Environmental Technology SERDP Washington, D.C. November 30.
- 59. \*Jackson, W.A., Rainwater, K.A., Anderson, T., Lehman, T.M., Ridley, M., Walden, S., and Tock, W.R., (2004) "Occurrence and Source of Perchlorate in the High Plains Aquifer System of Texas" The 11<sup>th</sup> Symposium in GRA's Series on Groundwater Contaminants, Glendale Ca. August 4.
- 60. W.A. Jackson, **K. Tan**, and T.A. Anderson (2004) Phytoremediation of Perchlorate in Macrophytes. *Remediation of Chlorinated and Recalcitrant Compounds, The 4<sup>th</sup> International Conference*, May 24-27, , Monterey, CA (Oral).
- 61. \*Jackson, W.A., (2004) Spatial Variability and Diversity in Natural and Engineered Systems. Seminar at Kennedy Space Center, Space Life Sciences Lab. March 18.

- 62. Morse, A., **A. Jackson** and E. McLamore (2004). Dual Nitrification and Denitrification in Biological Membrane Reactor, Habitation, Rosen Hotel, Orlando, FL, January 4-7.
- 63. \*Jackson, W. A., T. Anderson, and P. Smith, K. Tan, L. Yu, P. Joseph, and P. Laxman. (2004) Uptake of Perchlorate Plants. 227th ACS National Meeting. Anahiem, CA., March 29-April 1.
- 64. Rainwater, K.A. and **Jackson**, W.A., 2004. "Evaluation of Absorption and Evapotranspiration Capacity," Texas On-Site Wastewater Treatment Research Council Annual Conference, Waco, TX, March 2.
- 65. McLamore, E., Morse, A., **Jackson**, A., Rainwater, K., and Muirhead, D., 2004. "Development of a Nitrifying Bioreactor for the Treatment of Wastewater in Long-Term Space Applications," Proceedings of the Ninth Annual ASCE Aerospace Division International Conference on Engineering, Construction, and Operations in Challenging Environments, Houston, Texas, March 7-10.
- 66. **Jackson**, W.A., Rainwater, K.A., Anderson, T., Lehman, T.M., Ridley, M., Walden, S., and Tock, W.R., 2004, "Perchlorate in Groundwater in the Southern High Plains," Texas Water Conservation Association 2004 Annual Convention, Houston, TX, March 11-15.
- 67. **Jackson**, W.A., Rainwater, K.A., Anderson, T., Lehman, T.M., Ridley, M., and Tock, W.R., (2004) Occurrence of Perchlorate in Groundwater in the Southern High Plains of Texas," Water Quality Conference, East Valley Water District and American Water Works Association Research Foundation, Annual Convention, Ontario, California, Texas, October 27-29.
- 68. \*Smith, Philip N., Anderson, Todd A., and **Jackson, W. Andrew**. (2003) Perchlorate: Occurrence in Vegetation and Livestock. Progressive Grower's Continuing Education Series. The New Farming Environment: Agriculture's Legal, Social, and Biological Challenges. Alliance for Alternative Agriculture and Pacific Ag Group. December 5, San Luis Obispo, CA..
- 69. Tan, Kui, **Jackson, W.A.**, and T. Anderson. (2003) Phytoremediation of Perchlorate in Aquatic and Terrestrial Plants. *Society of Environmental Toxicology and Chemistry 24<sup>th</sup> Annual Meeting*. Austin, TX.
- 70. \*Jackson, W. A., T. Anderson, and P. Smith (2003) Plant Uptake of Perchlorate and Non-Industrial Occurrence. Fall 2003 Federal-State Toxicology and Risk Analysis Committee Meeting., November 3-5, Emeryville, CA.
- 71. \*Jackson, W. A. (2003) Plant Uptake of Perchlorate and Non-Industrial Occurrence. *Perchlorate Review Scholars Committee*. Urban Water Resources Center, October 22, Irvine, CA.
- 72. \*Jackson W.A. and J. Pardue. (2003) High Resolution Sampling Using Peepers or Dialysis Samplers. *Interstate Technology Regulatory Council*. September 29-October 1, Monterey CA.
- 73. \*Jackson, W. A. and P. Smith. (2003) Plant Uptake of Perchlorate and Ecological Risk Assessment. *USDA ORACBA Risk Assessment Forum.* October 1, Washington, D.C.
- 74. \*Jackson, W. A. and P. Smith. (2003) Plant Uptake of Perchlorate and Ecological Risk Assessment. *Tribal Concerns Perchlorate Contamination Conference*. September 9-10, Parker AZ
- 75. Yu, L., J. E. Cañas, G. P. Cobb, **W. A. Jackson**, and T. A. Anderson. (2003) Uptake of Perchlorate in Terrestrial Plants. 226th ACS National Meeting. New York, NY. September 7-11, Preprints of Extended Abstracts. 43(2):696-700.
- 76. \*Jackson, W.A. (2003) Large Scale Non-Industrial Occurrence of Perchlorate in the Texas Panhandle and Implications for Perchlorate Uptake by Crops. *The Seventh Symposium in GRA's Series on Groundwater Contaminants*. July 31, Sacramento, CA.
- 77. Rector, T., **W.A. Jackson**, K. Rainwater, and K. Pickering. (2003)Determination of the Fate and Behavior of a Commercial Surfactant in a Water Recycle System (WRS). 33<sup>rd</sup> International Conference on Environmental Systems (ICES), Vancouver, BC..
- **78.** Begeer, A., **W.A. Jackson**, and A. Morse. (2003) Biologically Treated Wastewater for NFT Plant Production in Space. *33<sup>rd</sup> International Conference on Environmental Systems (ICES), Vancouver, BC.*.
- 79. Morse, A., **W.A. Jackson**, K. Rainwater. (2003) Nitrification Using a Membrane-Aerated Biological Reactor, 33<sup>rd</sup> International Conference on Environmental Systems (ICES), Vancouver, BC.
- 80. Muirhead, D., T. Rector, **W.A. Jackson**, H. Keister, A. Morse, K. Rainwater, and K. Pickering. (2003) Performance of a Small Scale Biological Water Recovery System. 33<sup>rd</sup> International Conference on Environmental Systems (ICES), Vancouver, BC.
- 81. Morse, A., **A. Jackson** and E. McLamore (2004) "Dual Nitrification and Denitrification in Biological Membrane Reactor," Habitation, Rosen Hotel, Orlando, FL. January 4-7.
- 82. Rainwater, K.A. and Jackson, W.A., (2004) "Evaluation of Absorption and Evapotranspiration Capacity," Texas On-Site Wastewater Treatment Research Council Annual Conference, Waco, TX, March 2.

- 83. Jackson, W.A., Rainwater, K.A., Anderson, T., Lehman, T.M., Ridley, M., Walden, S., and Tock, W.R., (2004) Perchlorate in Groundwater in the Southern High Plains, Texas Water Conservation Association 2004 Annual Convention, Houston, TX, March 11-15.
- 84. \*Jackson, W.A., and A. Morse. (2003) Direct Recycling of Wastewater for Terrestrial and Space Applications. *Space Life Sciences Training Program*. Kennedy Space Center, FL.
- 85. \*Smith, P. and **W.A. Jackson**. (2003) Trophic Transfer Potential in Plants in Animals. *USDA-Food Safety Program*, Washington, D.C.
- 86. \*Smith, P. and **W.A. Jackson**. (2003) A Review of Perchlorate Screening Ecological Risk Assessment Emphasizing Unused and Developing Data Resources. *Interagency Risk Assessment Consortium*, Washington, D.C.
- 87. **Jackson**, W.A., K. Tan, T. Anderson. (2003) Distribution, Degradation, and Uptake of Perchlorate in Contaminated Stream Sediments. 7<sup>th</sup> International Conference on In Situ and On-Site Bioremediation. June 2003; Orlando, FL.
- 88. Tan, K., **W.A. Jackson**, T. Anderson, and J. Pardue. (2003) Treatment of Perchlorate Using Wetland Treatment Systems. 7<sup>th</sup> International Conference on In Situ and On-Site Bioremediation. June, Orlando, FL.
- 89. \*Jackson, W. A., P. Smith, and T. Anderson. (2003) Perchlorate Uptake by Plants. *Seminar EPA Region VI*. San Francisco, CA.
- 90. \*Jackson, W. A., P. Smith, and T. Anderson. (2003) Perchlorate Uptake by Plants. Santa Clara Valley Water District Irrigation and Fertilization Seminar. San Martin, CA.
- 91. \*Jackson, W.A., K. Rainwater, T. Lehman, and T. Anderson. (2003) Distribution of Perchlorate on the Southern High Plains. *Seminar to EPA Region IV*.
- 92. **Jackson, W.A.**, R. Tock, K. Rainwater, T. Anderson, T. Mollhagen, T. Lehman, and M. Ridley. (2003) Perchlorate in Groundwater in the Southern High Plains of Texas. *Southwest Focus Conference National Groundwater Association*; Phoenix, AZ, February 20-21.
- 93. **Jackson, W.A.**, R. Tock, K. Rainwater, and T. Anderson. (2003) Potential for Perchlorate Generation in Drinking Water Storage Tanks. *Texas Water* 2003; Corpus Christi, TX, April 2-4.
- 94. \*Pardue, J., and A. Jackson. (2002) GW–SW Case Studies in New Jersey and Other Locations. Summary of the Remediation Technologies Development Forum Sedimients Remediation Action Team Meeting. West Coast Grand Hotel at Fifth Avenue Seattle, WA, October 29-30.
- 95. **Jackson, A.**, K. Rainwater, D. Muirhead, A. Morse, T. Rector. (2003) "Development and Evaluation of Biological Reactors for Space Applications. 2003 Bioastronautics Investigators Workshop, Galveston, TX..
- 96. \*Anderson, T., **Jackson A**., Carr, J., Rinchard, J., McMurry, S. Dixon, K., Smith, P. (2002) "Perchlorate-Related Environmental Toxicology Data from Lab and Field Studies". 2002 *Perchlorate Conference*, Ontario, CA., October 16-18.
- 97. Morse, A., **A. Jackson**, K. Rainwater and K. Pickering. (2002) "Membrane Aerated Reactors for the Treatment of Simulated Wastewater," *WEFTEC 2002*, Chicago, IL, September 28-October 3.
- 98. D. Muirhead, K. Rainwater, A. Jackson, L. Urban, A. Morse, T. Rector and K. Pickering. (2002)
  Assessment of a Constructed Wetland for Recovery and Beneficial Use of Shredded Tires in a Colonia.

  Proceedings of the 2002 Joint CSCE/EWRI of ASCE International Conference on Environmental

  Engineering. Niagara Falls, ON.. (If you want to put Canada, then Vancouver, BC would have to have
  Canada too.) (How about just abbreviating the provinces and writing out the other countries?)
- Morse, A. Jackson, K. Rainwater, and K. Pickering (2002) Amoxicillin in a Wastewater Recycling System. Proceedings of the 2002 *Joint CSCE/EWRI of ASCE International Conference on Environmental Engineering*. Niagara Falls, ON.
- 100.T. Rector, **A. Jackson**, K. Rainwater, and K. Tan. (2002) Evaluation of Common Commercial Surfactants in a Waste Water Recycling Facility. *Proceedings of the 2002 Joint CSCE/EWRI of ASCE International Conference on Environmental Engineering*. Niagara Falls, ON.
- 101. **Jackson**, J. Pardue, and T. Anderson (2001) Natural Attenuation of Perchlorate in Bottomland and Fresh Water Marshes. 2<sup>nd</sup> International Conference on Wetlands. September, Burlington, VT.
- 102.**Jackson**, M. Jeon, J. Pardue, and T. Anderson. (2001) Enhanced Natural Attenuation of Perchlorate in Soils Using Electrokinetic Injection. 6<sup>th</sup> International Conference on In Situ and On-Site Bioremediation. June, San Diego, CA.

- 103. Pardue, J., A., **Jackson,** L. Martino, J. Wrobel, S. Hirsh. (2001) Application of a Dialysis Sampler to Monitor Phytoremediation Processes. 6<sup>th</sup> International Conference on In Situ and On-Site Bioremediation. June, San Diego, CA.
- 104. Jackson, A., J. Pardue, G. Nemeth, T. DeReamer, D. McInnis and D. Green. (2000) Optimization strategy for Enhancing Biodegradation in an Upland-Wetland Plume. In, Bioremediation and Phytoremediation of Chlorinated and Recalcitrant Compounds. *International Conference on Remediation of Chlorinated and Recalcitrant Compounds*. May, Monterey, CA.
- 105.Morse, A., A. Jackson, and R. Davio. (2001) "Environmental Characterization of Traditional Construction and Maintenance Materials," *Presented at the Beneficial Use of Recycled Materials in Transportation Applications*, Arlington, VA, November 13-15, Air and Waste Management Association.
- 106. **Jackson**, A, J. Pardue, and C. Clover. (1999) Natural Attenuation Case Study for Chlorobenzenes in a Forested Wetland. *Batelle International Conference on Wetlands and Remediation*. November, Salt Lake City, UT.
- 107.J. Pardue and A. Jackson. (1999) Design Approaches for Chlorinated VOC Treatment Wetlands *Batelle International Conference on Wetlands and Remediation*. November, Salt Lake City, UT.
- 108. Shin, W., J. Pardue and **A. Jackson**. (1999) Bioremediation of an Experimental Oil Spill in a Salt Marsh. *Batelle International Conference on Wetlands and Remediation*. November, Salt Lake City, UT.
- **109.**Leppich J., J. Pardue and **A. Jackson**. (1999) Plant-Air Partitioning of Chlorobenzenes in Wetland Vegetation at a Superfund Site. *Batelle International Conference on Wetlands and Remediation*. November, Salt Lake City, UT(NVIs there one in Nevada?).
- 110.\***Jackson** and J. Pardue. (1999) Role of Hydrogen in Correlating Microcosm and Field-Derived Rate Constants for TCE. *Hazardous Waste Research*, St Louis, MO.
- **111.**Pardue, J., **A. Jackson**, and C. Clover (1998) Natural Attenuation of Organics at the Petro Processors, Inc. Superfund Site: Potential for Metal Inhibition and Complete Anaerobic Degradation. *WEFTEC 1998 71*<sup>st</sup> Annual Conference and Exposition. Orlando, FL.
- 112. **Jackson**, A., Pardue J. (1998) Assessment of Heavy Metal Inhibition of Reductive Dechlorination of Hexachlorobenzene. *International Conference on Remediation of Chlorinated and Recalcitrant Compounds*, Monterey, CA.
- 113. Pardue, J., **A. Jackson**, R. Gale, M. Rabbi, B. Clark, and E. Acar. (1998) Electrokinetics as a Supporting Technology for In Situ TCE Biodegradation. *International Conference on Remediation of Chlorinated and Recalcitrant Compounds*. Monterey, CA.
- **114.**Trail, K., **A. Jackson**, J. Pardue, D. Constant, and D. McInnis. (1998) Attenuation of PCE: Induced Anoxic Versus Existing Oxic Conditions. *International Conference on Remediation of Chlorinated and Recalcitrant Compounds*. Monterey, CA.
- **115.**Clover, C., **A. Jackson**, and J. Pardue. (1998) Natural Attenuation of Mono- and Dichlorobenzenes in Anaerobic Surface Sediments at the Petro Processors Site. *International Conference on Remediation of Chlorinated and Recalcitrant Compounds*. Monterey, CA.
- **116.\*Jackson A.** and J. Pardue. (1997) Use of Stable Carbon Isotopes to Monitor Crude Oil Mineralization. *Annual Meeting of the Geological Society.* Salt Lake City, UT.
- 117. **Jackson**, **A** and J. Pardue. (1997) WERC/HSRC Joint conference on the environment. *Biostimulation* (is this simulation or stimulation?) and Natural Attenuation of Crude Oil in Gulf Coast Salt Marshes. Albuquerque, NM. 289-293.
- **118.Jackson**, **A.** and J. Pardue. (1995) Monitoring Crude Oil Mineralization in Salt Marshes: Use of Stable Carbon Isotope Ratios. *EPA Symposium on Bioremediation of Hazardous Wastes: Research Development and Field Evaluations*. New York, NY.
- 119. **Jackson**, **A**. and D. Roy. (1993) *Battelle International Conference on Bioremediation*. Enhanced Transport of Bacteria Using Colloidal Gas Aphrons. San Diego, CA.
- **120.Jackson, A.**, D. Roy, and D. Adrian. (1992) *Annual Meeting of the Fine Particle Society*. Enhanced Transport of a Pseudomonas Using an Anionic Surfactant DDBS. Las Vegas, NV.

# **Invited University Seminars**

Department of Environmental Engineering, Stanford University (2004)

Department of Civil and Environmental Engineering, University of Texas (2008, 2009) Department of Biology, Rhodes College (2008)

# **Teaching Experience**

# **Courses Taught**

A variety of courses taught from freshman to graduate level, small (5) to large (72), including graduate level design courses and capstone courses. Not included below is a number of special study courses offered to individual students participating in design competitions. Spring of 2002, awarded the Lockheed Martin Teaching Award.

CE/ENVE 3309	Introduction to Environmental Engineering
CE 3110	Environmental Engineering (Taught at LSU, BR.)
ENVE 1301	Introduction to Environmental Systems
CE 5383	Bioremediation
CE 5393	Unit Processes
CE 5391/4391	Advanced Water Treatment
ENVE 5305	Environmental Systems Design I (Co-taught)
ENVE 5306	Environmental Systems Design II (Co-taught)
CE 5101	Graduate Seminar (Co-taught)
ENVE 1101	Freshman Seminar (Developed)
CE 5390	Water Quality Analysis
CE 5399	Advanced Waste Water Treatment

SERDP Short Course- In Situ Bioremediation of Perchlorate in Groundwater