

Vanessa L. Lougheed

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Education:

2001 **Ph.D.** Department of Biology, McMaster University. Hamilton, ON, Canada.
1994 **B.Sc.** Department of Biology, McMaster University. Hamilton, ON, Canada.

Professional Experience:

2014-Present: **Assistant Chair**, Department of Biological Sciences, The University of Texas at El Paso (UTEP), El Paso, USA.
Sept. 2011 – present: **Associate Professor**, Dept. of Biological Sciences, UTEP.
Jan. 2005 – Aug. 2011: **Assistant Professor**, Dept. of Biological Sciences, UTEP.
June 2001 – Dec. 2004: **Postdoctoral Research Associate**, Algal Ecology Lab, Department of Zoology, Michigan State University, USA.
Jan. 2001 – May 2001: **Lecturer**, Department of Biology, University of Waterloo, Waterloo, ON, Canada

Professional Affiliations:

2008 - Present. American Geophysical Union (AGU)
2008 - Present. Society for the Advancement of Chicanos and Native Americans in Sciences (SACNAS)
2005 - Present. Sigma Xi, The Scientific Research Society
2003 - Present. Ecological Society of America (ESA)
1998 - Present. Society of Wetland Scientists (SWS)
1996-2006. International Association for Great Lakes Research (IAGLR)

Research

Grants:

Funded

Lougheed, V.L., J.R. McLaren, C.E. Tweedie. Revitalizing the UTEP Green Roof and Research Platform. UTEP Green Fund. \$55,000. 2015-2016.
Walsh, E., Doser, D., Hagedorn, E., Jin, L., **Lougheed**, V. TIERA: Training in Environmental Research and Academic Success. U.S. Department of Education - Minority Science and Engineering Improvement Program (MSEIP). \$604,868.00. (10/2013-09/2016).
Sowards, S. (Senior Personnel: Lougheed). Supporting Universities to Partner Across the Pacific. USAID. \$997,313 (2012-2015)
Jin, L., Borrok, D., Ma, L., **Lougheed**, V. Natural and human impacts on soil development in the Rio Grande Valley: Sustainability of agriculture and water resources on the US-Mexico border. Southwest Consortium for Environmental Research and Policy (SCERP). \$50,000.

Velasco, A.A., **Lougheed, V.L.**, Robertson, W.H. GK12: Science for a Sustainable Future: Developing the Next Generation of Diverse Scientists. National Science Foundation (NSF), GK-12, \$2,858,000.00. (02/2010 – 01/2015).

Walsh, E., M.Cox, W-Y. Lee, and V. **Lougheed**. Developing Monitoring Systems for Emerging Contaminants in the Rio Grande. UTEP Border Biomedical Research Center Pilot Project. \$25,000. (2010-2011).

Esposito, G. and V. **Lougheed**. What is the role of habitat isolation and dispersal ability on genetic diversity of aquatic invertebrates in former ranchlands of the northern Chihuahuan Desert? T&E, Inc. \$2500.00 (2010-2011).

Lougheed, V.L. Revisiting “The Limnology of Tundra Ponds”: Re-sampling historic sites to track global change in Arctic aquatic ecosystems. National Science Foundation (NSF), \$389,800. 09/2009-08/2013.

Lougheed, V.L. and K. Garza. URM Proposal: Mentoring of minority undergraduate research focused on the ecology of disease in the US-Mexico borderlands. National Science Foundation (NSF). \$650,007. 09/2009 – 08/2014.

Johnson, J., V. **Lougheed**, W. MacKay, C. Tweedie. Development of Indio Mountains Research Station, Phase III. National Science Foundation (NSF), \$106,651. 09/2009-08/2012.

Lougheed, V.L. Improving capacities to examine water quantity and quality of ephemeral inputs to the Forgotten Stretch of the Rio Grande. USIBWC Texas Clean Rivers Program. \$10,000. 2009.

Modave, F., E. Freudenthal, V. **Lougheed**, O. Varela. An Integrated, Multidisciplinary and Cross-Fertilizing Model for Computing Education. National Science Foundation (NSF), \$148,543. 2008-2010.

Lougheed, V.L. Fort Bliss Wetland GIS Database Project. Miratek (Fort Bliss DOD), \$64,000. 2008-2009.

Lougheed, V.L. Assessment of Management Strategies for Tumbleweed Control in a National Park Setting. National Park Service Desert Southwest CESU. \$14,000. 2008-2009.

Lougheed, V.L. and S. Palsole. Proposal to develop an on-line course in Antarctic System Science. UTTelecampus \$8,388. 2007.

Tweedie, C.E., V.L. **Lougheed**, W. Robertson and A. Velasco. IPY-ROAM: International Polar Year Research and Educational Opportunities in Antarctica for Minorities. National Science Foundation (NSF), \$455,000. 2006 – 2010.

Lougheed, V.L., C.E. Tweedie and R. Langford. A decision tool to aid water management and restoration of southwestern riparian habitats. Southwest Consortium for Environmental Research and Policy (SCERP). \$45,000. 2006 – 2008.

Lougheed, V.L. Rio Grande/Rio Bravo Bi-National Wetland. World Wildlife Fund (WWF) – Chihuahuan Desert Program. \$27,000. 2006 –2008.

Wiley, M. J. and 17 others. An Ecological Assessment of the Muskegon River Watershed to Solve and Prevent Environmental Problems. Great Lakes Fisheries Trust. \$1,596,594. 2003-2006; \$34,454 Subcontract to **Lougheed** (UTEP). 2005 - 2008

Lougheed, V. Monitoring the potential for ecological impacts of flash floods on an ephemeral desert stream at Indio Mountain Research Station. University Research Initiative (URI); \$2000. 2005-6.

Publications:

Refereed Publications (20 total) (*indicates student co-author)

- Andresen, C.G.* and V.L. **Lougheed**. 2015. Disappearing Arctic tundra ponds: Fine-scale analysis of surface hydrology in drained thaw lake basins over a 65 year period (1948–2013). *Journal of Geophysical Research – Biogeosciences*. DOI: 10.1002/2014JG002778
- Reyes, F.R.* and V.L. **Lougheed**. 2015. Rapid nutrient release from permafrost in Arctic aquatic ecosystems. *Arctic, Antarctic and Alpine Research*. 47(1): 35-48. DOI: <http://dx.doi.org/10.1657/AAAR0047.c1>.
- Andresen, C. G., Vargas, S. A., **Lougheed**, V. L., & Tweedie, C. E. 2014. Kite-based Aerial Photography (KAP): A Low Cost, Effective Tool for Wetland Research. *Wetland Science and Practice*, Dec, 28–31.
- Garcia, C.V.*, W.E. Robertson, V.L. **Lougheed**, C.E. Tweedie, and A. Velasco. 2013. Journey to the End of the Earth: Academic and Professional Benefits for Students Participating in a Field-based Research Program in Antarctica. *Journal of College Science Teaching*. 42:72-81.
- Lougheed**, V.L., M.G. Butler, D.C. McEwen, J.E. Hobbie. 2011. Changes in tundra pond limnology: Re-sampling Alaskan ponds after 40 years. *Ambio*. 40: 589-599.
- Callaghan, T.V. and 54 others. 2011. Multi-Decadal Changes in Tundra Environments and Ecosystems: Synthesis of the International Polar Year-Back to the Future Project (IPY-BTF). *Ambio*. 40: 705-716.
- Ordoñez C.*, V.L. **Lougheed**, J.L. Gardea-Torresdey and L. J. Bain. 2011. Impact of Metals on Macroinvertebrate Assemblages in the Forgotten Stretch of the Rio Grande. *Archives of Environmental Contamination and Toxicology*. 60: 426-436.
- Rodriguez, R.* and V.L. **Lougheed**. 2010. The potential to improve water quality in the middle Rio Grande through effective wetland restoration. *Water Science and Technology* 62(3): 501-509.
- Ogdahl, M.E., V.L. **Lougheed**, R.J. Stevenson, and A.D. Steinman. 2010. Influences of multi-scale habitats on metabolism in a coastal Great Lakes watershed. *Ecosystems* 13(2): 222-238.
- Robertson, W.E., C.V. Garcia*, V.L. **Lougheed**, C.E. Tweedie, and A. Velasco. 2009. Bridging the Gap Between Real World Polar Science and the Classroom. *Journal of College Science Teaching*. 39:18-22.
- Lougheed**, V.L., M.D. McIntosh, C.A. Parker, R.J. Stevenson. 2008. Wetland degradation leads to homogenization of biota at multiple trophic levels and spatial scales. *Freshwater Biology* 53: 2402-2413.
- Lougheed**, V.L., C.A. Parker, R.J. Stevenson. 2007a. Using non-linear responses of multiple taxonomic groups to establish criteria protective of wetland biological condition. *Wetlands* 27: 96-109.
- Lougheed**, V.L., R.J. Stevenson. 2004. Exotic marine macroalgae (*Enteromorpha flexuosa*) reaches bloom proportions in a coastal lake of Lake Michigan. *J. Great Lakes Res.* 30(4): 538-544.
- Lougheed**, V.L., T. Theysmeyer, T. Smith, P. Chow-Fraser. 2004. Carp exclusion, food-web interactions and the restoration of Cootes Paradise Marsh. *J. Great Lakes Res.* 30(1): 44-57.
- Lougheed**, V.L. and P. Chow-Fraser. 2002. Development and use of a zooplankton index to monitor wetland quality in the Great Lakes basin. *Ecol. Appl.* 12: 474-486.

- Lougheed**, V.L. and P. Chow-Fraser. 2001. Spatial variability in the response of lower trophic levels after biomanipulation in a freshwater marsh. *J. Aquat. Ecosystem Stress and Recovery* 9: 21-34.
- Lougheed**, V.L., B. Crosbie and P. Chow-Fraser. 2001. Primary determinants of macrophyte community structure in 62 marshes across the Great Lakes basin: latitude, land use & water quality effects. *Can. J. Fish. Aq. Sci.* 58: 1603-1612
- Lougheed**, V.L., B. Crosbie and P. Chow-Fraser. 1998. Predictions on the effect of carp exclusion on water quality, zooplankton and submergent macrophytes in a Great Lakes wetland. *Can. J. Fish. Aq. Sci.* 55: 1189-1197.
- Lougheed**, V.L. and P. Chow-Fraser. 1998. Factors that regulate the zooplankton community structure of a turbid, hypereutrophic Great Lakes wetland. *Can. J. Fish Aq.Sci.* 55:150-161.
- Chow-Fraser, P., V. **Lougheed**, V. LeThiec, B. Crosbie, L. Simser and J. Lord. 1998. Long-term response of the biotic community to fluctuating water levels and changes in water quality in Cootes Paradise Marsh, a degraded coastal wetland of Lake Ontario. *Wetland Ecology and Management* 6: 19-42.

Book Chapters and Contributions (4 total)

- Lougheed**, V.L., J. Herrera, W. Robertson, C.E. Tweedie. 2010. Out of the Frying Pan and Into the Freezer: Students from the desert travel to Antarctica! Invited paper *In: Polar Science and Global Climate: An International Resource for Education and Outreach*. Kaiser, B. (editor). Pearson Education Limited. Great Britain.
- Garcia, C.V., A. Giangiulio, V.L. **Lougheed**, W. Robertson, C.E. Tweedie. 2010. Polar Feasts! Invited paper *In: Polar Science and Global Climate: An International Resource for Education and Outreach*. Kaiser, B. (editor). Pearson Education Limited. Great Britain.
- Lougheed**, V.L., C.A. Parker, R.J. Stevenson. 2007b. Evaluation of rapid assessment techniques for establishing wetland condition on a watershed scale. Invited paper *In: Wetland and Water Resource Modeling and Assessment: Watershed Perspective*. Ji, W.W., J. Qi, S. Bao, and L. Geying (editors). CRC Press.
- R. Jan Stevenson, M.J. Wiley, S.H. Gage, V.L. **Lougheed**, C.M. Riseng, P. Bonnell, T.M. Burton, R.A. Hough, D.W. Hyndman, J.K. Koches, D.T. Long, B.C. Pijanowski, and J. Qi, A.D. Steinman, and D.G. Uzarski. 2007. Watershed Science: Essential, Complex, Multidisciplinary and Collaboratory. Invited paper *In: Wetland and Water Resource Modeling and Assessment: Watershed Perspective*. Ji, W.W., J. Qi, S. Bao, and L. Geying (editors). CRC Press.

Articles in Submission

- Lougheed**, V.L., C. Hernandez*, C.G. Andresen*, N.A. Miller*, V. Alexander, and R. Prentki. Contrasting responses of phytoplankton and benthic algae to recent nutrient enrichment in Arctic tundra ponds. *Freshwater Biology*. Revision submitted Apr. 2015.

Articles in Preparation

- Andresen, C. G.*, M.J. Lara*, C.E. Tweedie, V.L. Lougheed. Biomass and thaw depth increase in arctic tundra wetlands over decadal time scales: Implications for methane flux. *Global Change Biology*.

Non-Refereed Publications (Reports, Newsletters, Bulletins)

- Andresen, C. G. and **Lougheed, V.L.** Remote Sensing of Fort Bliss Wetlands. Report prepared for Fort Bliss Directorate of the Environment and Miretek. January 2010.
- Lougheed, V.L.** and C. G. Andresen. Fort Bliss Wetland GIS Database Project. Report prepared for Fort Bliss Directorate of the Environment and Miretek. September 2009.
- Lougheed, V.L.** and R. Rodriguez. Creation of a Chihuahuan Desert Bi-National Wetland: A Feasibility Assessment. Report prepared for the Chihuahuan Desert Program, World Wildlife Fund. May 2008.
- McNair, S. and V.L. **Lougheed**. 2003. Plankton: the hidden world of marshes. In “Between Land and Lake: Michigan’s Great Lakes Coastal Wetlands” By Albert, Dennis A. MSU Extension, East Lansing, MI.: Extension Bulletin E-2902. 96p.
- Lougheed, V.L.** and P. Chow-Fraser. 2001. Background paper and progress report for the coastal wetland network coordination meeting. February 22nd, 2001. A publication of the Great Lakes Fisheries Commission Coastal Wetland Network. McMaster University, Hamilton, ON.
- Lougheed, V.L.**, B. Crosbie and P. Chow-Fraser. 2000. Response of aquatic plants and zooplankton to water quality and land-use in 60 wetlands in the Great Lakes basin. The Wood Duck 53(9): 193.
- McDonald, G., P. Chow-Fraser, S. Baskin, S. Clearwater, B. Crosbie, S. Croke, V. **Lougheed**, W. McFarlane and L. Taylor. 1997. Literature review: The effects of highway stormwater runoff pollutants on aquatic life. Contracted by Ontario Ministry of Transport.

Websites:

- <http://ael.utep.edu> – Aquatic Ecology Lab at the University of Texas at El Paso
- www.ipyroam.org – International Polar Year: Research and Education Opportunities in Antarctica for Minorities

Presentations:

Contributed Meeting Presentations and Posters:

2015

Society of Wetland Scientists National Meeting (SWS) (2 posters),

2014

Ecological Society of America (ESA) Meeting, Sacramento, CA (1 poster)

Joint Aquatic Sciences Meeting, May 2014, Portland, OR (4 posters)

COURI Undergraduate Research Symposium, Summer 2014, El Paso, TX (1 poster)

2013

Ecological Society of America (ESA) Meeting, Minneapolis, MN (3 posters, 2 talks)

SACNAS National Conference, October 2011, San Antonio, TX (4 posters)

Society for Freshwater Science (SFS), (1 poster, 1 talk)

Society of Wetland Scientists National Meeting (SWS) (1 poster),

American Geophysical Union (AGU), San Francisco, CA, Dec. 2012 (3 posters)

UTEP Geological Science Colloquium, March 2011, El Paso, TX, (1 poster, 1 talk)

COURI Undergraduate Research Symposium, April 2011, El Paso, TX (3 posters)
American Society of Limnologists and Oceanographers (ASLO) (3 posters)

2012

American Geophysical Union (AGU), San Francisco, CA, Dec. 2012 (4 posters)
Ecological Society of America (ESA) Meeting, Portland, OR, Aug. 2012 (1 poster).
SACNAS National Conference, October 2012, Seattle, WA (5 posters)
Society for Freshwater Science (SFS), Louisville, KY, May 2012 (1 poster)
International Polar Year (IPY) 2012- From Knowledge to Action, Montreal, Canada (2 posters)
UTEP Geological Science Colloquium, March 2011, El Paso, TX, (3 posters, 2 talks)
COURI Undergraduate Research Symposium, April 2011, El Paso, TX (3 posters)

2011

American Geophysical Union (AGU), San Francisco, CA, Dec. 2011 (2 posters)
UTEP Geological Science Colloquium, March 2011, El Paso, TX, (2 posters, 1 talk)
COURI Undergraduate Research Symposium, April 2011, El Paso, TX (7 posters)
Society of Wetland Scientists National Meeting (SWS), Prague, Czech Republic, July 2011 (2 posters, 1 talk)
Ecological Society of America (ESA) Meeting, Austin, TX, Aug. 2011 (3 posters).
SACNAS National Conference, October 2011, San Jose, CA (3 posters, 1 talk)

2010

American Geophysical Union (AGU), San Francisco, CA, Dec. 2010 (1 poster)
State of the Arctic Meeting, Miami, FL, March 2010 (1 poster)
UTEP Geological Science Colloquium, March 2010, El Paso, TX, (1 poster)
International Polar Year - Oslo Science Conference, Oslo, Norway, June 2010 (1 talk)
SACNAS National Conference, October 2010, Anaheim, CA (4 posters, 1 talk)

2009

American Geophysical Union (AGU), San Francisco, CA, Dec. 2009 (1 poster)
Ecological Society of America (ESA) Meeting, Albuquerque, NM, Aug. 2009 (2 posters).
North American Benthological Society (NABS), May 2009 (1 talk)
UTEP Geological Science Colloquium. March 2009, El Paso, TX, (1 poster)

2008

Society of Wetland Scientists National Meeting (SWS), Washington, DC, May 2008. (4 posters, 1 talk)
SCAR/IASC Open Science Conference 2008. St. Petersburg, Russia. (2 posters)
Ecological Society of America (ESA) Annual Meeting 2008. (5 posters, 1 talk)
SACNAS National Conference, October 2008, Salt Lake City, UT (4 posters)
American Geophysical Union (AGU), San Francisco, CA, Dec. 2008. (1 talk)
UTEP SACNAS Student Research Expo, El Paso, TX (4 posters)

2007

North American Benthological Society (NABS), May 2009 (1 talk)
UTEP SACNAS Student Research Expo, El Paso, TX (3 posters)

2006

American Society of Wetland Managers (ASWM) meeting. Traverse City, MI, Aug. 2006.
(2 talks)
SACNAS National Conference, October 2006 (2 posters)
Ecological Society of America (ESA) Winter Meeting 2006. (1 poster)
Society of Wetland Scientists National Meeting (SWS), Cairns, AU (1 talk)
North American Benthological Society (NABS), 2006 (1 talk)
Ecological Integration STUDENT Research Symposium, Texas A&M University. April 1,
2006. (1 talk)

2005

SACNAS National Conference, 2005. (1 poster)
International Association for Great Lakes Research Conference (IAGLR). May, 2005. (2
talks, 1 poster)
North American Benthological Society (NABS), 2005 (1 talk)

2004

American Society of Limnologists and Oceanographers (ASLO). June 2004. (2 talks)
Ecological Society of America (ESA) Annual Meeting (2 posters)
North American Benthological Society (NABS), 2004 (1 talk)

2003

North American Diatom Symposium. Islamorada, FL, October 2003, (1 talk)
American Society of Wetland Managers (ASWM) meeting 2003, (1 talk)
Society of Wetland Scientists National Meeting (SWS), (2 talks)
International Association for Great Lakes Research Conference (IAGLR). (1 talk)
Ecological Society of America (ESA) Annual Meeting (1 poster)
Michigan. Association of American Geographers Annual Meeting 2003. (1 poster)

2002

Geological Society of America conference. Oct. 2002. (1 poster)
North American Benthological Society (NABS), (1 talk, 1 poster)
Undergraduate Research Forum. Michigan State University. March 2002. (1 poster)
Land Use Poster Forum. Michigan State University. February 21, 2002. (1 poster)

2001

Ecology of wetlands and shallow lakes: alternative stable states, anthropogenic influences,
and management options. Delta Marsh, Manitoba, Canada, August 15-19, 2001. (1
talk)
International Association for Great Lakes Research Conference (IAGLR). (1 talk)
Canadian Society of Zoology conference, Sudbury, ON. May 2001. (1 talk)
Lake Erie at the Millennium conference. Windsor, ON. 2001. (1 talk)

10th Annual Fish Physiology and Biochemistry Workshop. February 2001. (1 talk)

2000

Society of Wetland Scientists National Meeting (SWS), (1 poster)

International Association for Great Lakes Research Conference (IAGLR). (1 talk)

1999

International Association for Great Lakes Research Conference (IAGLR). (2 talks)

Lake Erie at the Millennium conference. Windsor, ON. April 26-28, 1999. (1 talk)

1998

International Association for Great Lakes Research Conference (IAGLR). (1 talk)

1997

International Association for Great Lakes Research Conference (IAGLR). (1 talk)

1995

International Association for Great Lakes Research Conference (IAGLR). (1 poster)

1994

Ontario Ethology and Ecology Colloquium. May 1-3, 1994. (1 talk)

Invited Presentations

2011 - "To The Ends of the Earth: UTEP AT THE POLES!" Sigma Xi Science Café, El Paso, TX. (January 2011).

2010 The history of aquatic pond research in Barrow, AK. (Saturday Schoolyard Outreach, Barrow Arctic Science Consortium (BASC), August 2010).

2009 Environmental Science at UTEP (Loretto Academy, El Paso, TX, November 19, 2009).

2009 Understanding recent change in Arctic pond ecosystems by re-sampling historic research sites. (International Polar Year: Back to the Future International Project Meeting, El Paso, TX, Nov. 10-13, 2009).

2009 Toward Environmental Literacy with Examples from the IPY (American Geophysical Union, Dec. 2009 Meeting)

2009 A lecture series on polar science research at UTEPs Centennial Museum:

Out of the frying pan and into the freezer: UTEP advancing our understanding of climate change in the Arctic. *Dr. Craig Tweedie (Biology), Dr. Vanessa Lougheed (Biology) & UTEP students.* (January 2008)

Global connections: how UTEP students, teachers and faculty became Antarctic explorers! *Dr. Vanessa Lougheed (Biology), Dr. Craig Tweedie (Biology) & UTEP students* (February 2008).

Women at the Poles! A summary of UTEP women researchers working in the Arctic and Antarctica. *Dr. Vanessa Lougheed (Biology), Dr. Diane Doser (Geology) & UTEP students.* (March 2008)

- 2008 Innovations in Education at UTEP: UTEPs IPY-ROAM Program (University of Texas Regental and Presidential Retreat, Dec. 18, 2008).
- 2008 A decision tool to aid water management and restoration of southwestern riparian habitats. (Southwest Consortium for Environmental Research and Policy Meeting, Dec. 2008).
- 2008 How I became a scientist. (UTEP Expanding Your Horizons Workshop, May 17, 2008).
- 2008 An overview of UTEP's NSF-funded ROAM program (UTEP College of Science Advisory Board Meeting, April 11, 2008).
- 2007 International Polar Year: Research and Educational Opportunities in Antarctica for Minorities (UTEP Environmental Science and Engineering Seminar Series, January 2007).
- 2007 Wetlands and water quality. (EPA Good Neighbor Environmental Board Meeting. Las Cruces, NM, Oct. 3, 2007).
- 2006 The Ecology of Disease. (Silva Health Magnet High School senior biology. El Paso, TX)
- 2005 Wetlands: You miss 'em when they're gone! (Audubon Society – El Paso, TX Chapter. Nov. 21, 2005).
- 2003 Carp exclusion, food-web interactions and the restoration of Cootes Paradise Marsh. (Aquatic Reading and Research Group, Michigan State University).
- 2002 An Ecological Assessment of the Muskegon River watershed. (Michigan Lake and Stream Association (MLSA) Annual Conference).

Teaching

Subjects Taught (UTEP):

Introductory Organismal Biology, Introduction to Environmental Science, Lab for Environmental Practice (Water sampling methods, Ecoinformatics), Environmental Science Senior Seminar, Field Biology in Antarctica, Studies in Antarctic System Science, Limnology, Ecosystem Ecology, Environmental Science Graduate Seminar, Biostatistics, Environmental Policy (Clean Water Act).

Graduate Students Mentored in Research (degree, year conferred, project title):

Ursula Sherrill (MS, 2008) - The restoration of wetland functions at the Rio Bosque Wetland Park in El Paso, TX, USA
 Ruth Rodriguez (MS, 2009) - Nutrient dynamics in a created desert wetland: Implications for the Rio Bosque Wetlands Park
 Mariana Vargas Medrano (MS, 2011) - Causes and consequences of changes in the algal community structure of Arctic tundra ponds from Barrow, Alaska
 Fernanda De La Cerda (MS, 2011) - Influence of orography on the weather patterns and water availability of a topographically complex Chihuahuan Desert region.
 Claudia Ortega (MSIS, 2011) – A water budget to aid in management of created desert wetlands.
 Gena Esposito (MS, 2012) – What is the role of isolation and disturbance on the diversity of aquatic invertebrates in former ranchlands of the northern Chihuahuan Desert?

Christina Hernandez (MS, 2012) - Recent changes in the growth and nutrient limitation of benthic and pelagic algae in Arctic tundra ponds.

Nickole Miller (MS, 2013) - Changes in net ecosystem production over the past 40 years in Arctic tundra ponds near Barrow, Alaska: Application of historic and modern techniques

Anna Ortiz (MS, 2013) - Soil respiration in a northern Chihuahuan Desert shrubland: seasonal and environmental controls.

Christian Andresen (PhD, 2014) – Monitoring and understanding decadal scale changes in hydrology, productivity and carbon balance in Arctic tundra ponds. *** *NSF Graduate Research Fellowship recipient****

Mariana Vargas Medrano (PhD, In progress) - Aquatic ecosystems changes in Arctic ponds as a response to warming temperatures.

Ector Martell (MS, In progress) - Post-fire recovery and resilience of benthic macroinvertebrate communities in streams of a ponderosa pine forest

Jennifer Ramos-Chavez (PhD, In progress) - Novel tools for community based assessment and monitoring of forest phenology response to environmental variability and change in the tropics

Gabriela Contreras (MS, In progress) – Optical properties of Arctic ponds and their relationship with water quality.

Y. Jeanette Olivarez (PhD, In progress) – TBD

Amorita Armendariz (PhD, In progress) - Sources and pathways of CO₂ production in Alaskan Arctic Coastal Plain freshwater ecosystems. *** *NSF Graduate Research Fellowship recipient****

Graduate Student Mentored As Committee Member (degree, year conferred, supervisor):

Graduated: Krystal Pearson (MS 2006, Langford), Chima Nzenumweh (MS 2006, Langford), Yvette Villegas (MS 2007, Gill), Alvaro Fernandez (MS 2008, Borrok), Mollie McIntosh (PhD 2008, Merritt (MSU)), Claudia V. Garcia (M.Ed. 2009, Robertson), Suzan Aranda Luna (MS 2010, Borrok), Shawn Dash (PhD 2011, Mackay), Ana Gutierrez (MS 2011, Borrok), G. Walker Johnson (M.S. 2011, Tweedie), Vicente Mata Silva (PhD 2011, Johnson), Sonny Emmert (MS, 2011, Gill), Adrian Aguirre (MS, 2011, Tweedie), David Lin (PhD 2012, Tweedie), Rebecca Marin (PhD 2012, Tweedie), Diana Martinez Gomez (MS 2012, Walsh), Christine Cox (MS 2012, Jin), Libia Gonzalez (MS 2012, Tweedie), Mark Lara (PhD 2012, Tweedie), Sandra Villarreal (PhD 2013, Tweedie), Jennifer Martinez (MS 2013, Walsh), Aline Jaimes (PhD 2014, Tweedie),

In progress: Domenic Lannutti (PhD, Walsh), Sergio Vargas (PhD, Tweedie), Toni Carrick (MS, Lee).

Graduate Student Mentored in Laboratory Rotations (degree, supervisor):

G. Walker Johnson (Ph.D., Tweedie), Mark Lara (PhD, Tweedie), David Lin (PhD, Tweedie), Sandra Villarreal (PhD, Tweedie).

Undergraduate Students Mentored in Research Programs:

NIH-Bridges Program: Christopher Tijerina (2005), Karla Moore (2006), Valerie Reyes (2006), Alyssa Stetler (2008)
 BURS (Biology Undergraduate Research Scholars): Fernanda De La Cerda (2006-2008).
 NSF-PREP (Pathways Research Experience Program): Daniel Arriaga (2009); Christina Hernandez (2009-2010), Diana Zamora-Reyes (2010-2011)
 NIH-RISE Scholars: Sarah Renteria (2007-2008)
 NSF-REU: Claudia Ortega (2005), Sandra Villarreal (2007), Jessie Hampton (2014)
 NSF-UMEB (Undergraduate Mentoring in Environmental Biology): Christian Andresen (2006-2008), Denise Nuñez (2007 – 2008)
 NSF-URM (Undergraduate Research Mentoring): Francisco Reyes (2009-2011), Ector Martell (2010-2011), Bianca Luong (2010-2012), Antonio Nevarez (2011), Julia Alva (2010-2012), Isa Valdez (2012-present), Aracely Tellez (2012-2015), Jeanette Olivarez (2013-2014).
 UpBit Bioinformatics Program: Laura Garcia (2010), Victor Omar Vasquez (2011).

Informal and K-12 teaching activities:

- 2014 Tech2O Wise Actions outreach program to middle school students about wetland science. Awarded “Partner of the Year” for these efforts.
- 2009-10 Development of graphic novel to teach school children about polar science (see non-refereed publications)
- 2008-9 Curated the UTEP Centennial Museum display: “*To The Ends of The Earth: UTEP at The Poles*” (ipyroam.utep.edu/museum).
 - Also participated in tours of display for local schoolchildren.
- 2008-10 Development of lesson plans for K-12 classrooms (e.g. Garcia et al. 2010; <http://ipyroam.utep.edu/education/lessons>)
- 2006 Contributed material to the UTEP Centennial Museum display: “*Building a Bosque*”

Service

Ad Hoc Reviewer

Grants:

Great Lakes Protection Fund (2002); Ecology and Oceanography of Harmful Algal Blooms; EPA-STAR (2004); Texas Advanced Research Program (ARP) UTEP pre-proposals (2005); NSF GK-12 review panel (2006); NSERC (National Sciences and Engineering Research Council of Canada): Healthy Environment and Ecosystems (2007); PolarTREC (Teachers & Researchers Exploring & Collaborating) (2009), SCERP Faculty Development Program (2010); NSF Arctic Observing Networks (2012); NSF-REU Program (2013).

Journals:

Aquatic Ecology (2006); Aquatic Sciences (2000-1); Canadian Journal of Fisheries and Aquatic Sciences (2003-2015); Ecological Applications (2008); Ecological Indicators (2009), Environmental Management (2005, 2009); Hydrobiologia – (2003, 2008); Journal

of Great Lakes Research (2005); Journal of the North American Benthological Society (2007); Reviews in Fisheries Science (2009); Transactions of the American Fisheries Society (2003, 2007); Wetlands (2006-present); Ambio (2011); Ecosphere (2011, 2014); Oecologia (2013); Arctic (2013); Freshwater Biology (2014-5); Global Change Biology (2014)

Other non-UTEP Service

- 2014-present. Director, Society of Wetlands Scientists, Undergraduate Mentoring Program.
- 2014 Society of Wetland Scientists National Conference Diversity Student Mentor
- 2011 Society of Wetland Scientists National Conference Diversity Student Mentor
- 2011 Judge of student presentations at the following conferences:
Society of Wetland Scientists Annual Conference (July 2011)
- 2010-2012 US Delegate to the International Arctic Science Committee Terrestrial Working Group (appointed by the National Academy of Science - Polar Research Board).
- 2009-2012 International Boundary and Water Commission (IBWC) Rio Grande Basin Monitoring Program
- 2009 Judge of student presentations at the following conferences:
SACNAS Research Expo (UTEP, April 2009)
Ecological Society of America (Albuquerque, August 2009)
- 2008 Organized Special Session: “*Linking Research and Education in the Sciences: The International Polar Year and Beyond*” at SACNAS National Conference 2008.
- 2008 Organized Special Session: “*International Polar Year: Research and Educational Opportunities in Antarctica for Minorities (IPY-ROAM)*” at Ecological Society of America Annual Meeting – August 2008.
- 2008 Aided in organization of events at Annual Diversity mixer (Theme: Polar Science) at Ecological Society of America Annual Meeting – August 2008.
- 2008-present. Member of Human Diversity Committee, Society of Wetland Scientists.
- 2008 Society of Wetland Scientists National Conference Diversity Student Mentor
- 2008 Judge of student presentations at the following conferences:
SACNAS Research Expo (UTEP, April 2008)
Society of Wetland Scientists Annual Conference (May 2008)
SACNAS National Conference (Oct. 2008)
Sigma Xi Annual Meeting (Nov. 2008)
- 2007 Judge of student presentations at the following conferences:
SACNAS Research Expo (UTEP, April 2007)
- 2006 Judge of student presentations at the following conferences:
SACNAS Research Expo (UTEP, April 2006)
Society of Wetland Scientists Annual Conference (July 2006)
Sigma Xi Annual Meeting Nov. 2006)
- 2005 Judge of student presentations at the following conferences:
International Association of Great Lakes Research (May 2005)

UTEP Committee Service

University Service

President's Advisory Committee on Sustainability (2013-present)
 Green Fund Committee - Faculty Advisor (2011 - Present)
 Women's History Month Committee (2008 - 2013).
 Women's Resource Center Advisory Board. (2008 - 2013).
 UTEP Faculty Senate.
 Alternate Senator (2007 - 2010).
 UTEP Senate Catalog and Calendar Committee. (2009 - 2012).
 UTEP Senate Undergraduate Scholarships Committee (2007-2008)
 UTEP Chapter of Sigma Xi, The Scientific Research Society
 UTEP Chapter Secretary, 2009-present
 UTEP Chapter Vice-President, President, 2007-2008
 Annual Meeting delegate, 2006, 2008
 UTEP Centennial Museum Native Plant Sale Volunteer (2006-2011).

College Service

Environmental Science Faculty Search Committee 2012 (Biogeochemistry)
 Environmental Science Program Oversight Committee (2010-present).
 Judges coordinator - College Office of Undergraduate Research Programs (COURI)
 Spring Research Symposium (2011-present)
 Academic advisor for Environmental Science (Biology track) students (2010-present)
 Environmental Science Program Ad Hoc Restructuring Committee (2009).
 Commencement Ceremonies Attended:
 Spring 2006, Fall 2006, Spring 2009, Spring 2010, Spring 2011, Fall 2012, Fall 2014
 Pre-commencement Ceremonies Attended:
 Fall 2006, Spring 2007, Fall 2007, Fall 2008, Spring 2009, Spring 2011, Fall 2011, Spring 2012, Fall 2014
 Faculty Marshall, Spring Convocation 2009.

Departmental Service

Faculty Search Committee 2013, Chair of Search Committee (Ecological Modeler)
 Faculty Search Committee 2012 (Global Change Biologist)
 Biological Sciences Departmental Advisory Committee (2012-present)
 Ecology and Evolutionary Biology Doctoral Program Steering Committee (2011-Present)
 Faculty Search Committee 2011 (Environmental Toxicologist)
 Biology Student Awards Committee Member (2011-present)
 Graduate Student Seminar Coordinator (2008 - 2010).
 Faculty Search Committee 2008 (Evolutionary Geneticist)
 Establishment and maintenance of weather station network at Indio Mountains Research Station (2009-2012)
 Academic advisor for Ecology/Evolution students (2007-present)
 Ecology Qualifying Exam Committee (2005-2008)

Community Service:

2014	TecH2O Wise Actions Middle School outreach program
2010	Solar City Task Force
2007-2011	Executive Member, Paso del Norte Watershed Council
2006-present	Board Member, Science Advisory Board for Keystone Wetland
2005-present	Member, Friends of the Rio Bosque