

*Curriculum Vitae*  
**James Edward Gawel**

Interdisciplinary Arts and Sciences Program  
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**EDUCATION**

- 1991-1996     **Massachusetts Institute of Technology**, Cambridge MA  
Doctor of Philosophy in Civil and Environmental Engineering  
Dissertation title: “Phytochelatins: Biomonitorers for Metal Stress in Terrestrial Plants”
- 1986-1990     **Brown University**, Providence RI  
Bachelor of Science in Civil Engineering with Emphasis on Environmental Problems and Planning

**ACADEMIC POSITIONS**

- 2005-present     **University of Washington, Tacoma**, Tacoma WA  
Associate Professor of Environmental Chemistry  
Interdisciplinary Arts and Sciences Program
- 2008-present     **University of Washington**, Seattle WA  
Adjunct Professor  
Department of Civil and Environmental Engineering
- 2011-2012     **University of Washington, Tacoma**, Tacoma WA  
Assistant Director  
Interdisciplinary Arts and Sciences Program
- 2006-2012     **University of Washington, Tacoma**, Tacoma WA  
Environmental Sciences Faculty Coordinator  
Interdisciplinary Arts and Sciences Program
- 2010-2011     **University of Washington, Tacoma**, Tacoma WA  
Curriculum Coordinator  
Interdisciplinary Arts and Sciences Program
- 1999-2005     **University of Washington, Tacoma**, Tacoma WA  
Assistant Professor of Environmental Chemistry  
Interdisciplinary Arts and Sciences Program
- 1996-1999     **Massachusetts Institute of Technology**, Cambridge MA  
Postdoctoral Associate in the Department of Civil and Environmental Engineering

**OTHER RELEVANT WORK EXPERIENCE**

- 1998-1999     **Town of Arlington**, Arlington MA  
*Consultant*  
Duties: Designed and coordinated water column, sediment, and stormwater investigation into the sources and mobility of arsenic in Spy Pond, an urban recreational resource.
- Jan. 1997     **Camp, Dresser and McKee, Inc.**, Cambridge MA  
*Consultant*  
Duties: Quantification of the potential impact of mining operations on metal loads and water quality in the Rio das Velhas watershed, Minas Gerais, Brazil.
- June-Oct. 1990     **United States Peace Corps**, Kenya  
*Water Supply Engineer*  
Duties: Design and construction of water supply projects in rural areas, requiring interaction with local communities and inspection and repair of completed projects.

**CURRENT RESEARCH**

- 2012-present     Metal pollution and forest decline in the Appalachian Mountains of New England.  
Co-Investigators: Dr. Erica Cline, Dr. Andrea Ferro, Clarkson University, Civil and Environmental Engineering, West Virginia University student Rebecca Posa, and UWT students Sharon Hunter and Jami Kovatch.
- 2012-present     Arsenic in urban lakes: mobility, bioaccumulation and ecological toxicity.

- Co-Investigators: Dr. Rebecca Neumann, UW Civil and Environmental Engineering, Dr. Evan Gallagher, UW Environmental and Occupational Health Science, Dr. Julian Olden, UW Aquatic and Fishery Sciences, Dr. Joe Ryan, University of Colorado, Environmental and Architectural Engineering, and UWT student Ali Ehle.
- 2012-present MusselWatch pilot expansion program.
- Co-Investigators: Dr. Joyce Dinglasan-Panlilio, and UWT student Michelle McCartha.
- 2011-present Web-based education and outreach project based on video documentary “Water Undone: The Effort to Save the Puyallup River Watershed”
- Co-Investigators: UWT staff members Chelsie Strowbridge, Brenda Lemay, Paul Lovelady and Megan Kogut.
- 2012-present Phosphorus removal from Ponce de Leon Creek, Steilacoom, WA.
- Co-Investigators: UWT student Ali Ehle and citizen Don Russell.
- 2009-present Using metallothionein production in mussels and marine worms for biomonitoring of metal stress in contaminated sediments in Puget Sound.
- Co-Investigators: Dr. Bonnie Becker, UWT students Michelle McCartha, Giovannina Souers, Joline Spencer, Kelly Doyle and Vicky Karout, faculty and students at the Science and Math Institute (SAMI), the School of the Arts (SOTA), and the Lincoln Center program at Lincoln High School.
- 2008-present Developing hydrology and nutrient models to characterize near-shore productivity in Spirit Lake, Mount St. Helens National Volcanic Monument, Washington.
- Co-Investigators: Dr. Charlie Crisafulli, USFS, Dr. Mark Sytsma, Portland State University, Dr. Mindy Roberts and staff member Bridget Mason, UWT; UWT students Cameron Marshall, Ashley Datema, Tiffany Wax, Heather Jennings, Nicole Butcher, Danielle Dahlquist, Erika Klein, Laura Alskog, Chelsie Strowbridge, Terri Hurlbut and Amy Leslie; and Ron Nilsen and students from Bellarmine High School.

#### PEER-REVIEWED PUBLICATIONS (\*UWT undergraduate student co-authors)

- Cline, E.T., Q.T.N. Nguyen\*, L. Rollins\*, J.E. **Gawel**. 2012. Metal stress and decreased tree growth in response to biosolids application in greenhouse seedlings and in situ Douglas-fir stands. *Environmental Pollution*, **160**: 139-144.
- Horner, R.A., C.L. Greengrove, K.S. Davies-Vollum, J.E. **Gawel**, J.R. Postel, A. Cox. 2011. Spatial distribution of benthic cysts of *Alexandrium catenella* in surface sediments of Puget Sound, Washington, USA. *Harmful Algae*, **11**: 96-105.
- Senn, D.B., J.E. **Gawel**, J.A. Jay, H.F. Hemond, and J.L. Durant. 2007. Long-term fate of a pulse arsenic input to a eutrophic lake. *Environmental Science and Technology*, **41**: 3062-3068.
- Gawel**, J.E., and C.L. Greengrove. 2005. Designing undergraduate research experiences for nontraditional student learning at sea. *Journal of Geoscience Education*, **53**: 31-36.
- Gawel**, J.E., and H.F. Hemond. 2004. Biomonitoring for metal contamination near two Superfund sites in Woburn, Massachusetts, using phytochelatin. *Environmental Pollution*, **131**: 125-135.
- Durant, J.L., T. Ivushkina, K. MacLaughlin, H. Lukacs, J. **Gawel**, D. Senn, and H.F. Hemond. 2004. Elevated levels of arsenic in the sediments of an urban pond: sources, distribution and water quality impacts. *Water Research*, **38**: 2989-3000.
- Wagner, W., J. **Gawel**, H. Furumai, M.P. De Souza, D. Teixeira, L. Rios, S. Ohgaki, A.J.B. Zehnder, and H.F. Hemond. 2002. Sustainable watershed management: an international multi-watershed case study. *Ambio*, **31**: 2-13. (cover article)
- Gawel**, J.E., C.G. Trick, and F.M.M. Morel. 2001. Phytochelatin are bioindicators of atmospheric metal exposure via direct foliar uptake in trees near Sudbury, Ontario, Canada. *Environmental Science and Technology*, **35**: 2108-2113.
- Gawel**, J.E., B.A. Ahner, A.J. Friedland, and F.M.M. Morel. 1996. Role for heavy metals in forest decline indicated by phytochelatin measurements. *Nature*, **381**: 64-65.

#### TECHNICAL REPORTS

- Gawel**, J.E. 2011. *Hydrology and Nutrient Budget for Wapato Lake, Tacoma, WA*. Technical Report prepared for the City of Tacoma, Tacoma, WA, 24 pp.
- Roberts, M., L. Shanafelt, K. Morris, and J. **Gawel**. 2009. *Baseline Data Report: Ueland Tree Farm*. Technical Report prepared for The Mountaineers Foundation, Seattle, WA, 98 pp.

- Gawel, J.E.**, and B. Mason. 2008. *Waughop Lake Sediment Phosphorus Study*. Technical Report prepared for the City of Lakewood, Washington, 2 pp.
- Gawel, J.E.**, D.B. Senn, H. Lukacs, K.J. MacLaughlin, and J.L. Durant. 2000. *Characterization and Cycling of Phosphorus and Arsenic in Spy Pond (Arlington, Massachusetts)*. Technical Report prepared for the Massachusetts Department of Environmental Management and the Town of Arlington, Massachusetts, January 2000, 46 pp.

#### **EDITOR-REVIEWED CONFERENCE PROCEEDINGS PUBLICATIONS**

- Horner, R.A., C.L. Greengrove, J.R. Postel, J.E. **Gawel**, K.S. Davies-Vollum, A. Cox, S. Hoffer, K. Sorensen, J. Hubert, J. Neville, and B.W. Frost. 2008. *Alexandrium* cysts in Puget Sound, Washington, USA. In: Moestrup, Ø., et al. (Eds.) *Proceedings of the XII International Conference on Harmful Algae*, Copenhagen, DK, 4-8 September 2007. International Society for the Study of Harmful Algae and Intergovernmental Oceanographic Commission of UNESCO, pp. 196-199.
- Acker, L., J.R. McMahan, and J.E. **Gawel**. 2005. The effect of heavy metal pollution in aquatic environments on metallothionein production in *Mytilus* sp. *Proceedings of the 2005 Puget Sound/Georgia Basin Research Conference*, March 29-31, 2005, Seattle, Washington.
- Gawel, J.E.**, and C.L. Greengrove. 2003. Designing undergraduate research experiences for nontraditional student learning at sea. In: Droscher, T. and D. A. Fraser, eds., *Proceedings of the 2003 Georgia Basin/Puget Sound Research Conference*, March 31-April 3, 2003, Vancouver, BC.
- Gawel, J.E.**, D.B. Senn, H.F. Hemond, K. MacLaughlin, H. Lukacs, and J.L. Durant. 1999. Effects of eutrophication and runoff on arsenic cycling in an urban lake. *Proceedings of ASCE's 1999 International Water Resource Engineering Conference*, Seattle, WA, August 8-12.

#### **DOCUMENTARY VIDEO**

- Gawel, J.E.**, P. Lovelady, and T. Kapler. 2010. *Water Undone: The Effort to Save the Puyallup River Watershed*. Funded by the *Russell Family Foundation* and the *University of Washington, Tacoma*.
- Gawel, J.E.**, P. Lovelady, S. Winch, and T. Kapler. 2004. *Urban Water: Sustainability in the Balance*. Funded by the *Alliance for Global Sustainability* and the *University of Washington, Tacoma*.

#### **BOOK REVIEWS**

- Gawel, J.E.** 2004. (Book Review) *Restoration of Puget Sound Rivers*, book by Montgomery, Bolton, Booth, and Wall, Eds. *Pacific Northwest Quarterly*, **95**: 152.
- Gawel, J.E.** 2001. (Book Review) *Smoke Wars: Anaconda Copper, Montana Air Pollution, and the Courts, 1890-1924*, book by Donald MacMillan. *Pacific Northwest Quarterly*, **92**: 103-104.

#### **POPULAR PRESS ARTICLES**

- Gawel, J.E.** 2012. Wapato Lake faces water quality problems, past and present. *Waterline*, **March 2012**: <http://www.walpa.org/waterline/march-2012/wapato-lake-faces-water-quality-problems-past-and-present/>.

#### **SELECT CONFERENCE PRESENTATIONS WITH PUBLISHED ABSTRACTS**

- Gawel, J.E.**, H. Jennings, A. Sonoqui, S. Ayers, C. Hancock and S. Remington. 2011. *Developing a data-intensive nutrient budget for Wapato Lake, Tacoma, Washington, with an eye towards future management*. Abstract of talk presented at the 31<sup>st</sup> International Symposium of the North American Lake Management Society, October 26-28, 2011, Spokane, WA.
- Gawel, J.E.**, N. Butcher, A. Datema, H. Jennings, C. Marshall, B. Mason, M. Roberts, T. Wax, M. Blanchet, A.J. Joseph, and C. Crisafulli. 2010. *Constructing a nutrient mass balance model for post-eruption Spirit Lake, Mount St. Helens National Volcanic Monument, Washington*. Abstract of talk given at the *Northwest Scientific Association 82<sup>nd</sup> Annual Meeting*, March 24-27, 2010, Centralia, WA.
- Horner, Rita A., James R. Postel, James E. **Gawel**, Cheryl L. Greengrove, Sian Davies-Vollum, Annie M. Cox, Jeff Hubert, Alexander Abrahamson, Julie Masura, and Bruce W. Frost. 2007. *Alexandrium catanella* cysts and environmental conditions in Puget Sound, WA: Results of a cyst survey. Abstract of talk given at the *Fourth Symposium on Harmful Algae in the U.S.*, October 29-November 1, 2007, Woods Hole, MA.
- Gawel, J.E.**, J.A. Asplund, J.W. Chynoweth, M.D. Sage, S.M. Burdick, M. Tollefson. 2007. The long-term impact of smelting operations on arsenic availability in lakes of the south-central Puget Sound region, Washington, USA. Abstract of talk given at the *ASLO 2007 Aquatic Sciences Meeting*, February 4-9, 2007, Santa Fe, New Mexico.

- Hubert, J., K.S. Davies-Vollum, A. Abrahamson, K. Sorensen, C.L. Greengrove, R. Horner, J. Postel, A. Cox, J.E. **Gawel**, and B. Frost. 2007. Do sediment conditions affect the incidence of *Alexandrium catenella* and paralytic shellfish poisoning? A study of sites from Puget Sound. (Abstract of poster presented at the 2007 Geological Society of America Cordilleran Section Meeting, Bellingham, WA). *Abstracts with Programs – Geological Society of America*, **39**(4): abstract# 120665.
- Greengrove, C.L., B.W. Frost, R.A. Horner, J.R. Postel, J.E. **Gawel**, K.S. Davies-Vollum, A. Cox, K. Sorensen, J. Hubert, S. Hoffer and J.Neville. 2006. *Alexandrium* cysts in Puget Sound, Washington, USA. Abstract of poster presented at the 12<sup>th</sup> International Conference on Harmful Algae, September 4-8, 2006, Copenhagen, Denmark.
- Greengrove, C.L., B.W. Frost, R.A. Horner, J.R. Postel, J.E. **Gawel**, K.S. Davies-Vollum, A. Cox, S. Hoffer, K. Sorensen, and J. Hubert. 2006. Survey of *Alexandrium* cysts in the surface sediments of Puget Sound, Washington. Abstract of poster presented at the *ASLO 2006 Summer Meeting*, June 4-9, 2006, Victoria, British Columbia, Canada.
- Greengrove, C.L., B.W. Frost, R.A. Horner, J.R. Postel, J.E. **Gawel**, K.S. Davies-Vollum, K. Sorensen, S. Hoffer, and S. Wagner. 2005. *Alexandrium* cysts in Puget Sound, Washington: Preliminary results of a survey. Abstract of poster presented at the *Third Symposium on Harmful Algae in the U.S.*, October 2-7, 2005, Pacific Grove, CA.
- Gawel**, J.E., M.D. Sage, S.M. Burdick, M. Tollefson. 2005. Arsenic distribution and mobility in urban lakes in the south-central Puget Sound region, Washington, USA. Abstract of poster presented at the *ASLO 2005 Summer Meeting*, June 19-24, 2005, Santiago de Compostela, Spain.
- Davies-Vollum, K.S., C.L. Greengrove, and J.E. **Gawel**. 2005. A skills-driven gateway course to prepare transfer students for success in upper division science courses. (abstract of poster presented at the 2005 Annual Meeting of the Geological Society of America, Salt Lake City, UT). *Abstracts with Programs – Geological Society of America*, **37**(7): paper# 234-5.
- Jay, J.A., N.E. Keon, H.F. Hemond, D.B. Senn, J.E. **Gawel**, and J.L. Durant. 2001. Investigation of road salt effects on arsenic release from the sediments of an urban pond (abstract of poster presented at the Spring 2001 Meeting of the American Geophysical Union, Boston, MA). *EOS Transactions AGU*, **82**(20): Spring Meet. Suppl., Abstract H42A-16.
- Gawel**, J.E., D.J. Brabander, F.M.M. Morel, and H.F. Hemond. 1999. Using bioindicators to monitor past and present arsenic contamination in groundwater near two Superfund sites in Woburn, Massachusetts (abstract of talk given at the Spring 1999 Meeting of the American Geophysical Union, Boston, MA). *EOS Transactions AGU*, **80**(17): Spring Meet. Suppl., Abstract H42F-08.
- Gawel**, J.E., C.G. Trick, and F.M.M. Morel. 1998. Phytochelatins are bioindicators of atmospheric metal insult to trees near Sudbury, Ontario, Canada (abstract of talk given at the Spring 1998 Meeting of the American Geophysical Union, Boston, MA). *EOS Transactions AGU*, **79**(17): Spring Meet. Suppl., Abstract H42G-4.
- Gawel**, J.E., B.A. Ahner, A.J. Friedland, and F.M.M. Morel. 1995. Metal stress and red spruce decline in the northeastern U.S. *Plant Physiology*, Suppl., **108**: 45.
- Gawel**, J.E., B.A. Ahner, A.J. Friedland, C.G. Trick, and F.M.M. Morel. 1995. Patterns of phytochelatin concentrations in the field: seasonal and spatial characteristics. Poster presented at *Fourteenth Annual Symposium of Current Topics in Plant Biochemistry, Physiology, and Molecular Biology*, Columbia, MO; Abstract #39.

#### CONFERENCE PRESENTATIONS WITH UNDERGRADUATES

- McCartha, M., B.J. Becker, and J.E. **Gawel**, 2012. Metallothionein as a Bio-indicator of Metal Toxicity in Commencement Bay. Student poster presented at the South Sound Science Symposium, October 30, 2012, Shelton, WA.
- Strowbridge, C., and J.E. **Gawel**. 2012. The Role of the Water Column in the Nutrient Budget of Spirit Lake, Washington. Student talk at the 2012 WALPA Annual Conference, October 24-26, 2012, Wenatchee, WA.
- Miller, A.J. and J.E. **Gawel**. 2012. Comparative Affiliative Behavior and Social Structure in Sykes and Vervet Monkeys in Kenya. Student poster presented at The Fifteenth Annual University of Washington Undergraduate Research Symposium, May 18, 2012, Seattle, WA.
- Hurlbut, T. and J.E. **Gawel**. 2012. The Role of Sediments and Aquatic Plants in the Nutrient Budget of Spirit Lake, Washington. Student poster presented at The Fifteenth Annual University of Washington Undergraduate Research Symposium, May 18, 2012, Seattle, WA.

- Klein, E., J.E. **Gawel** and C. Stowbridge. 2011. The Role of the Water Column in the Nutrient Budget of Spirit Lake, Washington. Student poster presented at the 31<sup>st</sup> International Symposium of the North American Lake Management Society, October 26-28, 2011, Spokane, WA.
- Dahlquist, D., J.E. **Gawel** and A. Leslie. 2011. The Role of Surface and Ground Waters in the Nutrient Budget of Spirit Lake, Washington. Student poster presented at the 31<sup>st</sup> International Symposium of the North American Lake Management Society, October 26-28, 2011, Spokane, WA.
- Alskog, L., J.E. **Gawel** and T. Hurlbut. 2011. The Role of Sediments and Aquatic Plants in the Nutrient Budget of Spirit Lake, Washington. Student poster presented at the 31<sup>st</sup> International Symposium of the North American Lake Management Society, October 26-28, 2011, Spokane, WA.
- Royer, K. and J.E. **Gawel**. 2011. The Role of Insects in the Nutrient Budget of Spirit Lake, Mount Saint Helens, Washington. Student poster presented at the 31<sup>st</sup> International Symposium of the North American Lake Management Society, October 26-28, 2011, Spokane, WA.
- Spencer, J., and J.E. **Gawel**. 2010. Using Metallothionein in Mussels as a Bioindicator of Metal Stress in South Puget Sound, Washington. Student poster presented at the 3<sup>rd</sup> Annual South Sound Science Symposium, October 27, 2010, Shelton, WA.
- Jennings, H., and J.E. **Gawel**. 2010. Water Column Nutrient Budget for Spirit Lake, Mount Saint Helens, WA. Student poster presented at The Thirteenth Annual University of Washington Undergraduate Research Symposium, May 21, 2010, Seattle, WA.
- Wax, T.A., and J.E. **Gawel**. 2010. The Nutrient Cycling of Insects by Spirit Lake, Mount Saint Helens, WA. Student poster presented at The Thirteenth Annual University of Washington Undergraduate Research Symposium, May 21, 2010, Seattle, WA.
- Rollins, L.G., E. Cline, and J.E. **Gawel**. 2010. Phytochelatin Production in *Pseudotsuga menziesii* Seedlings - a Greenhouse Study. Student poster presented at The Thirteenth Annual University of Washington Undergraduate Research Symposium, May 21, 2010, Seattle, WA.
- Butcher, N.M., and J.E. **Gawel**. 2010. Stream and Groundwater Nutrient Budget for Spirit Lake, Mount Saint Helens, WA. Student poster presented at The Thirteenth Annual University of Washington Undergraduate Research Symposium, May 21, 2010, Seattle, WA.
- Nguyen, Q.N., J.E. **Gawel** and E. Cline. 2009. Phytochelatin Production as a Bioindicator Suggesting Metal Stress in Douglas-fir Trees Treated with Municipal Biosolids. Student poster presented at The Twelfth Annual University of Washington Undergraduate Research Symposium, May 15, 2009, Seattle, WA.
- Marshall, C., and J.E. **Gawel**. 2009. The Role of Insects in Nutrient Cycling in Spirit Lake, Washington. Student poster presented at The Twelfth Annual University of Washington Undergraduate Research Symposium, May 15, 2009, Seattle, WA.
- Souers, G., and J.E. **Gawel**. 2009. Using metallothioneins in benthic marine worms as bioindicators of metal toxicity in Puget Sound. Student poster presented at the 2<sup>nd</sup> Annual South Sound Science Symposium, May 6, 2009, Shelton, WA.
- King, K., and J.E. **Gawel**. 2008. Arsenic Distribution in the Water Column and Sediments of Shallow Lakes Impacted by the ASARCO Smelter near Tacoma, Washington. Student poster presented at The Eleventh Annual University of Washington Undergraduate Research Symposium, May 16, 2008, Seattle, WA.
- Donley-McClure, S., and J.E. **Gawel**. 2008. Timeline of Deposition and Concentrations of Lead in Lake Sediments. Student poster presented at The Eleventh Annual University of Washington Undergraduate Research Symposium, May 16, 2008, Seattle, WA.
- Nguyen, Q.N., and J.E. **Gawel**. 2008. Measuring Metal Stress in Trees in Norway Using Phytochelatin. Student poster presented at The Eleventh Annual University of Washington Undergraduate Research Symposium, May 16, 2008, Seattle, WA.
- Price, T., and J.E. **Gawel**. 2006. The role of heavy metal concentrations on the decline of the Norway spruce in Norwegian forests. Student talk presented at the 2006 UWT Environmental Research Symposium (UWATERS), June 5, 2006, Tacoma, WA.
- Asplund, J.A., and J.E. **Gawel**. 2006. Arsenic cycling in relation to physical and chemical parameters in lakes of South Puget Sound, Washington. Student poster presented at The Ninth Annual University of Washington Undergraduate Research Symposium, May 19, 2006, Seattle, WA.
- Chynoweth, J.W., and J.E. **Gawel**. 2006. A comparative limnological analysis of lakes inside and outside of the blast zone 25 years after the 1980 eruption of Mount St. Helens. Student poster presented at The Ninth Annual University of Washington Undergraduate Research Symposium, May 19, 2006, Seattle, WA.

- Sage, M., and J.E. **Gawel**. 2005. Arsenic mobility as a function of physical and chemical parameters in lakes in south King County, Washington. Student poster presented at The Eighth Annual University of Washington Undergraduate Research Symposium, May 13, 2005, Seattle, WA.
- Acker, L., J.R. McMahan, and J.E. **Gawel**. 2005. The effect of heavy metal pollution in aquatic environments on metallothionein production in *Mytilus* sp. Student oral presentation at The Seventh Annual University of Washington Undergraduate Research Symposium, May 13, 2005, Seattle, WA.
- Hurt, J., and J.E. **Gawel**. 2005. Site analysis and remediation prospects for lead contamination in former WWI and WWII army firing ranges: A study of the Miller Hill ranges of Fort Lewis, Washington. Student poster presented at The Eighth Annual University of Washington Undergraduate Research Symposium, May 13, 2005, Seattle, WA.
- Soto, S., and J.E. **Gawel**. 2004. Metallothionein concentrations in Commencement Bay mussels as bioindicators of metal stress. Student poster presented at The Seventh Annual University of Washington Undergraduate Research Symposium, May 14, 2004, Seattle, WA.
- Lenigan, L., and J.E. **Gawel**. 2003. Arsenic release from American Lake sediments. Student poster presented at The Sixth Annual University of Washington Undergraduate Research Symposium, May 16, 2003, Seattle, WA.
- Halvorsen, N.L., J.E. **Gawel**, and C.L. Greengrove. 2004. Oceanographic data for the Pacific Northwest coast from Washington to Northern California: results from an undergraduate research cruise (poster abstract). In T.W. Droscher and D.A. Fraser (eds). *Proceedings of the 2003 Georgia Basin/Puget Sound Research Conference*. March 31-April 3, 2003, Vancouver, BC.

#### **GRANTS AND AWARDS RECEIVED**

- 2013 E3 Washington Green Apple Award for Formal Educator in a College/University
- 2013 UWT Distinguished Community Service Award Nominee
- 2013 Pierce County Surface Water Management (\$1000) – “Wapato Lake Phosphorus Study.”
- 2013 IAS Funds to Support Research (\$4,732) – “Geochemical Controls on Metal Bioavailability in Lakes.”
- 2012 Pierce County Surface Water Management (\$1000) – “Phosphorus Reduction Study.”
- 2012 IAS Funds to Support Research (\$3,100+\$2,360) – “Metal Pollution and Forest Decline in the Appalachian Mountains of New England.”
- 2012 City of Tacoma Make a Splash Grant (\$4,000) – “UWT Green Roof Initiative.”
- 2011 The Russell Family Foundation (\$28,000) – “Water Undone: the Effort to Save the Puyallup River Watershed (Documentary Post-Production).”
- 2011 The Russell Family Foundation (\$2,000) – “Documentary Dissemination – Water Undone: the Effort to Save the Puyallup River Watershed.”
- 2011 UWT Chancellor’s Fund for Research and Scholarship (written with UWT students Chelsie Strowbridge, Amy Leslie and Terri Hurlbut, \$4,700) – “Modeling nutrient sources and sinks in lakes in Mount St. Helens National Monument, Washington.”
- 2011 Green Partnership Fund, Pierce Conservation District (\$10,000) – “UWT Rain Gardens and Native Plant Interpretive Project.”
- 2011 UW Husky Green Award nomination – UWT Hood Corridor Planning Team
- 2011 Pierce Conservation District Stream Team Award – UWT Environmental Program
- 2010 City of Tacoma, Office of Sustainability, Sustainable Tacoma Grant (\$3,994) – “Energy Reduction in the UWT Science Building: A Model for Campus Sustainability.”
- 2010 U.S. Forest Service, Pacific NW Research Station award for new research at Mount St. Helens National Volcanic Monument
- 2010 UW Husky Green Award winner – UWT Environmental Programs
- 2010 Nominated for the UWT Distinguished Research Award
- 2010 The Mountaineers Foundation (\$3,000) – “Nutrient Cycling in Spirit Lake Thirty Years after Eruption.”
- 2010 City of Tacoma, Office of Sustainability (\$1,000) – “Envisioning Tacoma as a Leader in the New Green Economy.”
- 2010 Russell Family Foundation (\$15,000) – “Puget Sound Nearshore Biomonitoring Study.”
- 2010 Russell Family Foundation (\$15,000) – “First Creek Volunteer Monitoring and Stewardship Project”

- 2010 Green Partnership Fund, Pierce Conservation District (\$10,000) – “ISCE Projects: Giving Garden Expansion, Green Building and First Creek Restoration.”
- 2009 City of Tacoma, Research Contract (\$205,549) – “Wapato Lake Study.”
- 2009 UW Undergraduate Research Mentor Award (small cash award and engraving)
- 2009 University of Washington Tacoma, Founders Endowment Grant (\$5,262) – “Undergraduate research field experiences at Mount St. Helens: Building a Bioenergetics Model for Spirit Lake.”
- 2009 UWT Center for Leadership and Social Responsibility, Curriculum Enhancement Grant (\$1000 submitted with Bridget Mason and Kayomi Wada) – “Service Learning in TESC 410: Environmental Science Senior Seminar.”
- 2008 Greater Tacoma Community Foundation, Green Partnership Fund (\$23,965 submitted with Bridget Mason and Kayomi Wada) – “Proposal for the Institute for Service to the Community and Environment (ISCE).”
- 2008 University of Washington Tacoma, Chancellor’s Fund for Research and Scholarship (\$5,000 submitted with Sián Davies-Vollum) – “Urbanization and Metal Pollution in Puget Sound: a Historical Spatial Analysis.”
- 2008 UWT Center for Leadership and Social Responsibility, Curriculum Enhancement Grant (\$2000 submitted with Bridget Mason) – “Service Learning in TESC 410: Environmental Science Senior Seminar.”
- 2008 University of Washington Tacoma, Founders Endowment Grant (\$6,413 collaborative proposal submitted by Erica Cline) – “Do Biosolids Cause Tree Stress? Undergraduate Research Assessing Metal Stress in Douglas-fir Trees Treated with Municipal Biosolids and the Role of Mycorrhizal Root Communities in Metal Uptake.”
- 2007 University of Washington Tacoma, New Program Development Grant (\$15,000) – support for developing pre-allied health offerings at UWT.
- 2007 University of Washington Tacoma, Founders Endowment Grant (\$5,700) – “Out of Sight, Out of Mind: Urban Water Management Issues in Puget Sound (a video documentary learning tool).”
- 2006 Norwegian Institute of Science and Technology (~\$10,000) – “Phytochelatin as bioindicators of the role of metal stress in forest decline in Norway.”
- 2006 University of Washington Tacoma, Chancellor’s Fund for Research and Scholarship (\$5,000) – “Arsenic fate and transport in lakes in south-central Puget Sound.”
- 2006 Russell Family Foundation (\$10,000) – video documentary of modern urban water quality issues affecting Puget Sound
- 2006 University of Washington Bergen-Trondheim Faculty Exchange Program (\$1,155) – airfare to Trondheim, Norway, for research on the effects of metal stress on forest decline in Scandinavia
- 2005 University of Washington Tacoma, Founders Endowment Grant (\$7,500) – “Phytochelatin as bioindicators of the role of metal stress in forest decline in Norway.”
- 2005 Nominated for UWT Distinguished Teaching Award
- 2005 Mount St. Helens National Monument Research Pulse (paid participation) – Invited participation in 5-day data collection field camp and research colloquium at Mount St. Helens National Monument, Washington.
- 2004 NOAA, ECOHAB Program (\$444,216) – “The relationship between paralytic shellfish toxins and *Alexandrium* cysts in Puget Sound, WA.”
- 2004 University of Washington (\$17,500) – Brotman Award for Teaching Excellence
- 2004 University of Washington (\$1,000) – Institute for Teaching Excellence
- 2004 National Science Foundation Regional Workshop (paid participation) – “New approaches and techniques for teaching science: addressing environmental problems to stimulate undergraduate learning.”
- 2004 Outstanding Student Organization Advisor (nominee) – Project Earth
- 2003 University of Washington Tacoma, Founders Endowment Grant (\$6,600) – “Metallothioneins as bioindicators of metal stress in mussels in Commencement Bay, WA.”
- 2002-2003 UWT Faculty Scholarship Support award (one quarter teaching release)
- 2002 University of Washington Tacoma, Founders Endowment Grant (\$7,600 joint proposal with Cheryl Greengrove, submitted by Cheryl Greengrove) – “Estuarine and sedimentary conditions in Commencement Bay: establishing oceanographic undergraduate research opportunities.”
- 2002 PNNL Equipment Gift and Loan Program (muffle furnace valued at \$1,500)

- 2001 University of Washington Tacoma, Founders Endowment Grant (\$4,924 joint proposal with John Banks, submitted by Jim Gawel) – “Effect of metal stress on broccoli-aphid interactions: greenhouse experiments.”
- 2000 Alliance for Global Sustainability (\$59,973) – “Water for life: an AV-production about the sustainable use of our water resources.”
- 2000 University of Washington Tacoma, Founders Endowment Grant (\$4,332 joint proposal with John Banks, submitted by John Banks) – “Effect of metal stress on broccoli-aphid interactions: field experiments.”

#### GRADUATE THESES/RESEARCH SUPERVISED

- Laakso, A. In Progress.
- LaFontaine, M. 2012. *Assessment and Monitoring of Water Quality in Lake Waughop, a Small Kettle Lake in Lakewood, Washington, as a Service-Learning Project: A Case Study Approach*. M.A. Thesis, Interdisciplinary Arts and Sciences Program, University of Washington – Tacoma, Tacoma, WA.
- Roberts, T. 2007. *The Thea Foss Waterway Superfund Site: A Case Study in Community Involvement*. M.A. Thesis, Interdisciplinary Arts and Sciences Program, University of Washington – Tacoma, Tacoma, WA.
- Bates, A. 2005. *Environmental Injustice: An Evaluation of Tacoma, Washington*. M.A. Thesis, Interdisciplinary Arts and Sciences Program, University of Washington – Tacoma, Tacoma, WA.
- Albaugh, A. 2002. “Metallothionein analysis as a measure of heavy metal stress in the sea anemones *M. senile*, *A. elegantissima*, and *A. artemisia* in Puget Sound, WA.” M.S. in Civil & Environmental Engineering, University of Washington, Seattle, WA.
- MacLaughlin, K.J. 1999. *An Investigation of Arsenic in Spy Pond*. M.Eng. Thesis, Department of Civil and Environmental Engineering, Massachusetts Institute of Technology, Cambridge, MA.

#### INVITED TALKS/PRESENTATIONS

- 2013 University of Washington Superfund Research Program (UW-SRP) sponsored agency seminar series at EPA Region 10 (national webinar) - *The Long-Term Impact of Metal Smelting Operations on Arsenic Availability in Urban Lakes of the South-Central Puget Sound Region*.
- 2013 Washington Native Plant Society – Puyallup River documentary and web education project.
- 2012 Pierce County Executive, Sustainability Coalition Meeting – Puyallup River documentary and web education project.
- 2012 Friends of Pierce County – screening of *Water Undone: the Effort to Save the Puyallup River Watershed* at The Grand Cinema for their annual meeting.
- 2011 Chambers-Clover Watershed Council – “Developing a data-intensive nutrient budget for Wapato Lake, Tacoma, Washington, with an eye towards future management.”
- 2011 Tacoma MetroParks – “Developing a data-intensive nutrient budget for Wapato Lake, Tacoma, Washington, with an eye towards future management.”
- 2011 WA Dept. of Ecology – “Nutrient cycling in post-eruption Spirit Lake, Mount St. Helens National Volcanic Monument.”
- 2011 Pierce College (Ft. Steilacoom campus) – screening of *Water Undone: the Effort to Save the Puyallup River Watershed*.
- 2011 Puyallup River Watershed Council (annual retreat keynote presentation) – screening of *Water Undone: the Effort to Save the Puyallup River*
- 2011 Pierce College (Puyallup campus) – screening of *Water Undone: the Effort to Save the Puyallup River*
- 2011 Seattle School District (teachers workshop sponsored by UW College of Education) – screening of *Water Undone: the Effort to Save the Puyallup River*
- 2010 UW Tacoma – screening of *Water Undone: the Effort to Save the Puyallup River*
- 2010 Washington Lakes Protection Association Annual Conference, Tacoma, WA – fieldtrip to Wapato Lake and presentation on nutrient sources and control in urban lakes.
- 2010 Aquatic Ecology Seminar Series, Olympia Forestry Sciences Laboratory, US Forest Service Pacific NW Research Station, Olympia, WA – “Leeches, Logs and Loadings: Constructing a Nutrient Mass Balance for Post-Eruption Spirit Lake.”
- 2010 Fennel Creek Preservation Group, Bonney Lake, WA – “Water Undone: The Effort to Save the Puyallup River Watershed.”



- 2010 UWT Environmental Seminar Series, Tacoma, WA – “Leeches, Logs and Loadings: Constructing a Nutrient Mass Balance for Post-Eruption Spirit Lake.”
- 2010 WSU Vancouver Seminar, Vancouver, WA – “Leeches, Logs and Loadings: Constructing a Nutrient Mass Balance for Post-Eruption Spirit Lake.”
- 2010 Northwest Science Association, Centralia, WA – “Constructing a nutrient mass balance model for post-eruption Spirit Lake, Mount St. Helens National Volcanic Monument, Washington.”
- 2010 Waterfront Tacoma, UWT Urban Studies Community Forum, Tacoma, WA – “Applied Research, Undergraduate Education and Service Learning: The UWT Environmental Science Model.”
- 2009 Washington Lakes Protection Association, Spokane, WA – “The Long-Term Impact of Metal Smelting Operations on Arsenic Availability in Urban Lakes of the South-Central Puget Sound Region.”
- 2009 UWT Environmental Seminar, Tacoma, WA – “The Long-Term Impact of Metal Smelting Operations on Arsenic Availability in Urban Lakes of the South-Central Puget Sound Region.”
- 2008 Friends of Wapato Lake, Tacoma, WA – “Wapato Lake Volunteer Monitoring Program.”
- 2008 Washington State Department of Ecology, Lacey, WA – “The Long-Term Impact of Metal Smelting Operations on Arsenic Availability in Urban Lakes of the South-Central Puget Sound Region.”
- 2008 Seattle University, Department of Civil and Environmental Engineering, Seattle, WA – “The Long-Term Impact of Metal Smelting Operations on Arsenic Availability in Urban Lakes of the South-Central Puget Sound Region, Washington, USA.”
- 2008 American Water Resources Association, Washington Section Dinner Meeting, Seattle, WA – “Urban Water: Sustainability in Balance.”
- 2008 American Fisheries Society, North Pacific International Chapter Annual Meeting, Bellingham, WA – “A Puyallup River Documentary: Population Growth and the Impact on Urban Waters.”
- 2008 Fifth Annual KJC Winter Lecture, Bremerton, WA – “Cities and the Sound: Population Growth and the Impact on Urban Waters.”
- 2006-07 UWTV, Seattle, WA – Cable broadcast and webcast of “Urban Water: Sustainability in the Balance” on multiple dates (<http://www.uwv.org/programs/displayevent.asp?rid=3271>).
- 2006 Woburn Public Media Center, Massachusetts – Cable broadcast of “Urban Water: Sustainability in the Balance” on multiple dates in February 2006.
- 2005 United States Geological Survey, Tacoma, WA – Presentation of “Urban Water: Sustainability in the Balance.”
- 2005 Sigma Xi Annual Meeting and Student Research Conference, Seattle, WA – “Comparative Analysis of Three Urban Watersheds on Three Different Continents.”
- 2004 Lecture at the University of Puget Sound, Tacoma, WA – “Arsenic Chemistry in Lakes: A Coast to Coast Trip.”
- 2004 Biological Oceanography Seminar Series, UW School of Oceanography, Seattle, WA – “Biological monitoring of metal stress in marine invertebrates using metallothioneins.”
- 2004 Puget Creek Restoration Society, Water Quality Conference, Tacoma, WA – “Modern Urban Water Management Issues.”
- 2003 Environmental Chemistry Speaker Series, UW Dept. of Civil and Environmental Engineering, Seattle, WA – “Pruning trees in two countries in the name of research: biomonitoring for metal stress using phytochelatins.”
- 2001 Graduate Seminar Series, UW Dept. of Civil and Environmental Engineering, Seattle, WA – “Arsenic sources and cycling in a hyper-eutrophic urban lake.”
- 2000 EPA Water Quality Monitoring and Analysis meeting, Olympia, WA – “Groundwater monitoring using phytochelatins and their promise for surface water.”
- 2000 U.S. Geological Survey, Water Science Center Office, Tacoma, WA – “Using phytochelatins to monitor metal stress in trees at environmental exposure levels.”

## **PROFESSIONAL REGISTRATIONS**

Engineer in Training (EIT)

## **PROFESSIONAL SOCIETIES**

American Society of Limnology and Oceanography

Northwest Science Association

Sigma Xi

Washington Lake Protection Association

## **COURSES TAUGHT**

TIAS 305: Seminar in Interdisciplinary Arts and Sciences  
TESC 200: Environmental Seminar  
TESC 300: Introduction to Environmental Science (lab course)  
TESC 303: Sustainable Development in Africa – Study Abroad (field course)  
TESC 310: Environmental Research Seminar  
TESC 333: Environmental Chemistry (lab course)  
TESC 345: Pollution and Public Policy  
TESC 347: Maritime History and Science in the Pacific Northwest  
TESC 349: Research at Sea (field course)  
TESC 410: Environmental Science Senior Seminar  
TESC 433: Pollutant Fate and Transport in the Environment (lab course)  
TESC 435: Limnology (field course)

## **SERVICE**

### Program

Chair, search committee for Environmental Studies tenure-track position (2013-2014)  
Search committee for 3-year Chemistry Lecturer position  
Presented to the IAS Advisory Board on the Environmental Science and Studies program in 2012  
Participated in initial meetings of the ad hoc IAS Interdisciplinarity Committee  
IAS Assistant Director (2011-2012)  
Environmental Sciences Program Coordinator (2006-2012)  
IAS Curriculum Coordinator (2010-2011)  
Chair, tenure review committee for Erica Cline (2011)  
Global Honors Thesis Advisor – Cody Patterson (2011)  
Concentration Coordinator for Environmental Science and Studies (2006-2012)  
IAS Faculty and Staff Search Committees (2000-2012) – Environmental Biochemistry/Toxicology (search committee 2012, Chair 2009– *search cancelled*), Organic Chemistry Lecturer, Biology Lecturers, Writing, Mathematics, IAS Director, Environmental Science/Physics (Chair), Applied Mathematics, Instructional Laboratory Coordinator (2), Environmental Organic Chemistry (Chair), Port of Tacoma Endowed Chair, Mathematics Coordinator, Clinical Psychology (2), Developmental Psychology (2), Geology, Environmental Science Lab Coordinator, Writing and Small Press Publishing, International Relations  
Chair, 3<sup>rd</sup> year review committee for Joyce Dinglasan-Panlilio (2010)  
Fred Haley Writing Awards judge (2010)  
Developed a PARC proposal for a B.S. in Environmental Engineering with Joyce Dinglasan-Panlilio (2008-09)  
Phase III, Science Building Design Committee (2008-09)  
Member of Erica Cline’s Third-Year Review Committee (2008)  
Curriculum for the Bioregion Workshop – Chemistry Curriculum Planning (2008-09)  
UWT Energy Minor – collaboration with the Institute of Technology (2008-2009)  
UWT Environmental Program Alumni Survey (2008)  
UWT Environmental Law and Regulations Certificate (2009)  
UW Environmental Opportunities Fair, Seattle, WA (2009)  
Pierce College Restoration Project Discussion Group (2008)  
IAS Faculty Council (2006-2008)  
Developed a PARC proposal for the Pre-Med curriculum with Erica Cline (2007-08)  
Coordinated major revisions to the B.A. in Environmental Studies (2006-08)  
Chaired Siân Davies-Vollum’s tenure committee (2006)  
Member of Michael Kucher’s tenure committee (2006)  
IAS peer evaluation of faculty teaching (2000, 2006, 2007, 2008, 2009)  
Science Building design team (1999-2002)  
UW Restoration Ecology Network – committee member (1999-2002)  
IAS Writing Task Force (2002-2004)

IAS Psychology Task Force (2004)  
UWT Science Day – recruiting event (2004)  
UWT Science Open House (2000)  
Fred Haley Writing Awards Committee (2003)  
IAS Faculty Morale Survey (2005)

University

UWT Sustainability Advisory Committee, member (ended June 2012)  
Completed installation of the second UWT Rain Garden, funded by the Green Partnership Fund  
Nominated for UWT Distinguished Community Service award  
Participated in planning UWT fundraiser aboard the historical ferry boat at Point Ruston  
Invited to participate in the SCEWestNet meeting at Seattle University to discuss incorporating undergraduate research in chemistry courses across the region  
Finished installation of energy meters in the Science Building (funded by a Sustainable Tacoma Grant) to be monitored on an energy dashboard available to the entire campus  
Chancellor’s Advisory Committee on Sustainability (2010-2012)  
IAS representative to campus Assessment Committee (2011-2012)  
Presented to visiting Russian delegation interested in environmental science at UWT (2011)  
Conference on Sustainability in Pierce County Higher Education (Chair of Organizing Committee 2008 and Member of Committee 2009-2012)  
*Investing in your future: generating momentum for your research agenda.* UW Junior Faculty Workshop (panelist 2010)  
Joint Curriculum for the Bioregion and UWT Summer Faculty Institute Workshop (organizer and co-facilitator 2009)  
UWT Advising Task Force (Committee member 2009)  
UWT Survey Committee (Committee member 2009-2011)  
UWT Academic Foundations Retreat Participant (2008)  
UWT/Community College Summer Faculty Institute (organizer and facilitator 2005, 2006, and 2007)  
Tacoma Community College – two guest lectures and class visits to UWT to test lead in drinking water, coordinated with Sue Habeck in Biology (2007)  
UWT Search Committee for Assistant Vice Chancellor of Sponsored Research (2007)  
UWT Strategic Planning, Vision Committee member (2007)  
Advisory Board member for Math, Science and Leadership Program at UWT (2006-2007)  
Worked with Urban Studies on developing BA in Sustainable Urban Development (2006)  
UWT Faculty Affairs Committee (2000-2003; Chair 2000-2002)  
UWT Faculty Assembly Executive Committee (2000-2002)  
UW Faculty Senate (2003-2005)  
UW Graduate Faculty (2002-present)  
Coordinator of UWT collaboration with the Sea Education Association (2000-2002)  
Co-coordinator of USGS/UWT co-location initiative (1999-2003)  
UWT Brownfields Cleanup Grant Proposal (\$673,000) – contributor (2004)  
UWT Search Committee for IT Director (2002)  
UWT Distance Education Task Force (2000-2002)  
Project Earth (Outstanding Student Organization of the Year) – Faculty Advisor (2002-2005)  
UW Graduate School Representative (GSR) for two candidates (2002-2007)  
Urban Policy Center – discussion group member (2003)  
UWT Science Building Grand Opening – planning group (2002)  
“Teams in Teaching and Learning” (sponsored by UWT Teaching and Learning Roundtable) – panel member (2003)  
Lloyd Kaufman guest lecture (UWT Arts and Lectures fund) – organizer (2001)  
Wilma Subra guest lecture (UWT Arts and Lectures fund) – organizer (2000)

Community

Collaborating with the Puyallup Watershed Coalition to organize the first Puyallup River Conference for 2014  
Presented research findings to the Lake Killarney Improvement Association  
“Wake Up Wapato” Community Outreach and Education Events at Wapato Lake, Tacoma (organized now by MetroParks, participant in 2012)

Puget Sound Biomonitoring Project – with Lincoln High School and Tacoma’s Science and Math Institute students (2010-present)  
 Environmental Chemistry Outreach event – First Creek Middle School (2011)  
 Co-sponsored public lecture by Dr. Riki Ott, “Democracy Hijacked and How to Fix It,” with the League of Women Voters, Sierra Club and Washington Public Campaigns (2011)  
 Participated as table leader for the 2011 Youth Environmental Summit at First Creek Middle School (2011)  
 Sustainable Tacoma Commission, City of Tacoma (appointed by City Council 2009-2012)  
 South Sound Sustainability Exposition (Chair of Organizing Committee 2008 and Member of Committee 2009-2012)  
 Greater Tacoma Community Foundation – grant proposal review panel (2008-2012)  
 “Envisioning Tacoma as a Leader in the New Green Economy,” community event co-hosted with the City of Tacoma’s Office of Sustainability and IAS (2010)  
 “Wake Up Wapato” Community Outreach and Education Events at Wapato Lake, Tacoma (organizer and facilitator 2008-10)  
 Chamber Creek Foundation – collaborative planning (2009)  
 Tacoma/Pierce County Health Department, “Pierce County Trends” Focus Group (2009)  
 City of Tacoma Advisory Board for EPA Watershed Grant Application (2009)  
 Sponsored talks by Arlene Blum, Green Science Policy Institute (2009)  
 Hosted Tacoma Green Drinks (2009)  
 “Freedom of the Hills” Chapter Author, The Mountaineers (2009)  
 Rotary Club of Tacoma – hosted visit and discussion of environmental science research collaborations with faculty from the Vladivostok (2008)  
 Coordinated with Tacoma/Pierce County Health Department to collect and share water quality data on Pierce County lakes (2006-2011)  
 Sponsored talk by Christopher Swain, activist who swam the length of the Columbia River (2007)  
 Tacoma Community College Scholarships for Upward Mobility – Advisory Board member (2007)  
 The Mountaineers, Tacoma branch – member and course instructor (2000-present)  
 Tacoma Environmental Commission (2000-2003)  
 Puget Sound Center for Urban Bay Research – Scientific and Technical Advisory Board (2004-2005)  
 Thea Foss Waterway Source Control Group (2002-2005)  
 Coordinating and Advancing Marine Science Education in Puget Sound (funded by the Russell Family Foundation) – Steering Committee Member (2003-2004)  
 Water Monitoring Expo – educational collaboration between Project Earth and USGS (2002)  
 Riviera Community Club (Anderson Island, WA) – free technical consultation (2002)

Professional

Washington Lakes Protection Association, President (2012-2013)  
 Grant review for Murdock Charitable Trust  
 Peer reviewed manuscript for Water, Air, Soil Pollution  
 Chair of the organizing committee for the 2012 WALPA Annual Conference  
 MusselWatch Pilot Expansion Study – organization committee and volunteer coordinator for Commencement Bay study sites (2012-2013)  
 Reviewed manuscript for Water, Air, and Soil Pollution (2012)  
 WALPA President-Elect (2011-2012)  
 WALPA/NALMS 2011 Conference Planning Committee (2010-2011)  
 WALPA Board Member (2010-present)  
 Reviewer for *Water, Air, Soil Pollution*; *Andean Geology*; *Archives of Environmental Contamination and Toxicology*; *Environmental Science and Technology*; *Environmental Pollution*; *Atmospheric Environment*; *Geochimica et Cosmochimica Acta*; and *Journal of Geoscience Education* (2002-2012)  
 WALPA 2010 Conference Host at UWT (2010)  
 UW Royalty Research Fund – reviewer (2004 and 2009)  
 EPA STAR Fellowship – Invited review panel member for Environmental Chemistry and Materials Science area, Washington, DC (2006)  
 Sigma Xi Annual Meeting and Student Research Conference, Seattle, WA – student poster judge and networking lunch discussion leader (2005)  
 Washington State Lake Protection Association (WALPA) – Board Member (2001-2003)  
 WALPA 2003 Annual Meeting – Poster Session Organizer (2003)

WALPA 2002 Annual Meeting – Oral Session Moderator (2002)  
Reviewer for W.H. Freeman environmental science textbook (2002)  
American Society for Environmental History – field trip coordinator (2000)