

*Curriculum Vitae*  
**James Edward Gawel**  
(prepared 15 January 2026)

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## EDUCATION

1991-1996	Massachusetts Institute of Technology, Cambridge MA Doctor of Philosophy in Civil and Environmental Engineering Dissertation title: "Phytochelatins: Biomonitor for Metal Stress in Terrestrial Plants" Advisor: François M. M. Morel
1986-1990	Brown University, Providence RI Bachelor of Science in Civil Engineering with Emphasis on Environmental Problems and Planning

## ACADEMIC POSITIONS

2024-present	University of Washington, Tacoma, Tacoma WA Professor of Environmental Chemistry and Engineering School of Interdisciplinary Arts and Sciences
2008-present	University of Washington, Seattle WA Adjunct Professor Department of Civil and Environmental Engineering
2005-2024	University of Washington, Tacoma, Tacoma WA Associate Professor of Environmental Chemistry and Engineering School of Interdisciplinary Arts and Sciences
2018-2020	University of Washington, Tacoma, Tacoma WA Associate Dean for Faculty Support and Initiatives School of Interdisciplinary Arts and Sciences
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 and Engineering Interdisciplinary Arts and Sciences Program
1996-1999	Massachusetts Institute of Technology, Cambridge MA Postdoctoral Associate in the Department of Civil and Environmental Engineering

## SCHOLARSHIP

### **PEER-REVIEWED JOURNAL ARTICLES (\*undergraduate student, \*\*graduate student) [Gawel role in work]**

(accepted). Brown, D.J., V.H. Dale, K. Queen, S. Claeson, J.E. Gawel, T. Chestnut. Mount St. Helens 2025 Science Pulse.

Submitted to the *Bulletin of the Ecological Society of America* as a 'Meeting Review'.

Buser-Young, J., A.M. Gardell, V. Zalutskiy\*, B.R. Briggs, J.E. **Gawel**, S.R. Alaei. Arsenic contamination drives homogenizing selection in freshwater lake periphyton. *Science of the Total Environment* (impact factor = 8.0), 1014:181403.

<https://doi.org/10.1016/j.scitotenv.2026.181403> [co-PI, data analysis, and writing]

Myers, S.R., H.E. Germeau\*, M. McCann\*, W. Cranston\*, C.M. Crisafulli, K. Fox-Dobbs, J.E. **Gawel**. 2024. Establishment and ecological integration of the New Zealand mud snail in Spirit Lake, Mount St. Helens, Washington State, USA. *Aquatic Invasions* (impact factor = 2.21) 19(3):287–307. <https://doi.org/10.3391/ai.2024.19.3.134082> [PI and mentor to new lead author; co-lead on fieldwork, data analysis, and writing]

Shinneman, A.L.C., K. Fox-Dobbs, E. Sevier\*, A. Luchetto\*, J. Davis, J.E. **Gawel**. 2024. Contribution of log mat periphyton to benthic productivity at Spirit Lake, Mount St. Helens National Volcanic Monument, WA, USA. *Northwest Science* (impact factor = 0.64) 97(3). <https://doi.org/10.3955/046.097.0305> [co-author, co-PI, and lead for all fieldwork]

Fung\*\*, S.R., E.A. Hull, J.E. **Gawel**, A.R. Horner-Devine, R.B. Neumann. 2024. Short-term arsenic cycling in a shallow, polymictic lake. *Water Resources Research* (impact factor = 6.16). [co-PI, data collection lead]

Hull, E.A., R. Stiling\*\*, M. Barajas, R.B. Neumann, J.D. Olden, J.E. **Gawel**. 2023. Littoral sediment arsenic concentrations predict arsenic trophic transfer and human health risk in contaminated lakes. *PLoS ONE* (impact factor = 3.752) 18(10): e0293214. <https://doi.org/10.1371/journal.pone.0293214> [co-PI; co-lead on fieldwork, data analysis, and writing]

Fung\*\*, S.R., E.A. Hull, K.A. Burkart, J.E. **Gawel**, A.R. Horner-Devine, R.B. Neumann. 2022. Seasonal patterns of mixing and arsenic distribution in a shallow urban lake. *Water Resources Research* (impact factor = 6.16), 58. <http://dx.doi.org/10.1029/2022WR032564> [co-PI, data collection lead]

*Selected for featuring as an Editor's Highlight published on Eos.org: <https://eos.org/editor-highlights/understanding-enhanced-arsenic-pollution-in-shallow-lakes>. "Fewer than 2 per cent of papers are selected to be featured in this way."*

**Gawel**, J.E., EC Cline, Z. Kmail, S. Hunter\*, R. Cesa\*, A.R. Ferro. 2022. Mercury drives metal stress response in red spruce foliage in high-elevation Appalachian forests of New England, USA. *Water, Air, Soil Pollution* (impact factor = 2.98), 233:370. <http://dx.doi.org/10.1007/s11270-022-05836-x>. [co-PI with EC Cline and lead author; co-lead on all data collection and fieldwork]

Hull, E.A., M. Barajas, K.A. Burkart\*, S.R. Fung, B.P. Jackson, P.M. Barrett, R.B. Neumann, J.D. Olden, J.E. **Gawel**. 2021. Human health risk from consumption of aquatic species in arsenic-contaminated shallow urban lakes. *Science of the Total Environment* (impact factor = 10.75), 770:145318. <https://doi.org/10.1016/j.scitotenv.2021.145318>. [co-PI, research lead, and co-author with former UWT student (current UWT employee in my lab)]

Barrett, P.M., E.A. Hull, K. Burkart\*, O. Hargrave\*, J. McLean\*, V.F. Taylor, B.P. Jackson, J.E. **Gawel**, R.B. Neumann. 2019. Contrasting arsenic cycling in strongly- and weakly-stratified contaminated lakes: Evidence for temperature control on sediment-water arsenic fluxes. *Limnology and Oceanography* (impact factor = 5.02), 64: 1333-1346. <https://doi.org/10.1002/lno.11119> [co-PI and equal co-author; lead for all data collection and fieldwork]

Barrett, P.M., E.A. Hull, C.E. King, K. Burkart\*, K.A. Ott\*\*, J.N. Ryan, J.E. **Gawel**, R.B. Neumann. 2018. Increased exposure of plankton to arsenic in contaminated weakly-stratified lakes. *Science of the Total Environment* (impact factor = 10.75), 625: 1606-1614. <https://doi.org/10.1016/j.scitotenv.2017.12.336> [co-PI and equal co-author; lead for all data collection and fieldwork]

**Gawel**, J.E., J.A. Asplund\*, S. Burdick\*, M. Miller\*, S.M. Peterson\*, A. Tollefson\*, and K. Ziegler\*. 2014. Arsenic and lead distribution and mobility in lake sediments in the south-central Puget Sound watershed: The long-term impact of a metal smelter in Ruston, Washington, USA. *Science of the Total Environment* (impact factor = 10.75), 472: 530-537. <https://doi.org/10.1016/j.scitotenv.2013.11.004> [PI and sole author]

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* (impact factor = 9.99), 160: 139-144. <https://doi.org/10.1016/j.envpol.2011.09.012> [equal co-author with Erica Cline; oversaw all chemical analyses]

Horner, R.A., C.L. Greengrove, K.S. Davies-Volumn, J.E. **Gawel**, J.R. Postel, A. Cox\*\*. 2011. Spatial distribution of benthic cysts of *Alexandrium catanella* in surface sediments of Puget Sound, Washington, USA. *Harmful Algae* (impact factor = 5.91), 11: 96-105. <https://doi.org/10.1016/j.hal.2011.08.004> [co-PI with Greengrove and Davies-Volumn; lead on metals analysis and writing that section]

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* (impact factor = 11.34), 41: 3062-3068. <https://doi.org/10.1021/es062444m> [co-PI and equal co-author with Dave Senn; co-lead for all data collection and chemical analyses]

**Gawel**, J.E., and C.L. Greengrove. 2005. Designing undergraduate research experiences for nontraditional student learning at sea. *Journal of Geoscience Education* (impact factor = 2.42), 53: 31-36. <https://doi.org/10.5408/1089-9995-53.1.31> [lead author and co-designer of course with Greengrove]

**Gawel**, J.E., and H.F. Hemond. 2004. Biomonitoring for metal contamination near two Superfund sites in Woburn, Massachusetts, using phytochelatins. *Environmental Pollution* (impact factor = 9.99), 131: 125-135. <https://doi.org/10.1016/j.envpol.2004.01.012> [sole author and co-PI; lead on research design and all analyses]

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* (impact factor = 13.4), 38: 2989-3000. <https://doi.org/10.1016/j.watres.2004.04.010> [sub-author; played key role in data collection and editing]

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* (impact factor = 6.943), 31: 2-13. <https://doi.org/10.1579/0044-7447-31.1.2> (cover article) [lead author]

**Gawel**, J.E., C.G. Trick, and F.M.M. Morel. 2001. Phytochelatins are bioindicators of atmospheric metal exposure via direct foliar uptake in trees near Sudbury, Ontario, Canada. *Environmental Science and Technology* (impact factor = 11.34), 35: 2108-2113. <https://doi.org/10.1021/es0016250> [sole author and co-PI; lead on research design and all analyses]

**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* (impact factor = 69.504), 381: 64-65. <https://doi.org/10.1038/381064a0> [sole author and co-PI; lead on research design and all analyses]

## **JOURNAL MANUSCRIPTS IN REVIEW/PREPARATION (\*undergraduate student, \*\*graduate student) [Gawel role in work]**

(in revision). Fricke\*\*, R.M., J.E. Gawel, A. Shinneman, L. Martin\*, S. Bogstie\*, J.D. Olden. Motivations to visit and perceived barriers to accessing the cultural ecosystem services offered by blue-green public spaces on urban lakes. Submitted to *Lake and Reservoir Management*.

(in preparation). Hall, T., J.E. Gawel, A.G. Weisberg, E.C. Heery. Squid for the city: Accessibility and safety of an emerging urban fishery. To be submitted to *Fish and Fisheries* in 2025.

(in preparation). Bammler, T.K., J.W. MacDonald, M. Driessnack, E.A. Hull, M. Barajas, R.B. Neumann, J.D. Olden, J.E. Gawel. Genetic markers of arsenic toxicity in sunfish at environmentally relevant concentrations in shallow lakes (tentative title). To be submitted in 2025. [co-PI; co-lead on fieldwork, data analysis, and writing]

(in preparation). Saunders\*\*, J.K., N. Kellogg, K. Gibbons, M. Duffy, J.E. **Gawel**, A. Rigg, M. Saito, M. McIlvin, C. Knox, M. Legendre-Fixx, M. Acker, and G. Rocap. Arsenic biotransformation by strains of the marine picocyanobacterium *Prochlorococcus* with varying capacities for arsenic detoxification. To be submitted to *Nature Communications* in 2025. [contributed analytical expertise and member of Thesis committee]

## **INVITED PEER-REVIEWED BOOK CHAPTER**

**Gawel**, J.E., C.M. Crisafulli, R. Miller. 2018. The new Spirit Lake: changes to hydrology, nutrient cycling and biological productivity. In: Crisafulli, C.M., and V.H. Dale (Eds.), *Ecological Responses at Mount St. Helens: Revisited 35 years after the 1980 Eruption*, Springer Nature, New York, NY, pp 71-95. [PI and lead author]

## **TECHNICAL REPORTS (\*undergraduate student, \*\*graduate student)**

**Gawel**, J.E., and M. Schuler\*. 2023. *Spanaway Lake Sediment Phosphorus Study*. Technical report prepared for Brown & Caldwell and Pierce County. [PI and lead author]

Hull, E.A., M. Barajas, R.B. Neumann, J.E. **Gawel**. 2022. *A Comparative Analysis of Human Health Risk from Arsenic in Multiple Freshwater Fish Species in Western Washington Lakes*. Technical report prepared for WA Dept. of Fish and Wildlife. [PI and editor]

Rynning\*\*, J., E.A. Hull, and J.E. **Gawel**. 2022. *Risk assessment of arsenic exposure from simulated shoreline play in three Washington lakes*. Technical report prepared for Public Health Seattle/King County. [PI and mentor to MPH student as lead author]

**Gawel**, J.E. 2020. *Clarks Creek Data Summary: Sediment Oxygen Demand/Sediment Nutrient Release Report*. Technical report prepared for Brown & Caldwell and Pierce County. [PI and sole author]

**Gawel**, J.E., and C. Wu\*. 2018. *Twin Lakes Data Report*. Technical report prepared for the City of Federal Way, WA. [PI and lead author]

**Gawel**, J.E., and K. Oliva-Membreno\*. 2018. *Wapato Lake Water Quality Monitoring Data Report*. Technical report prepared for Tacoma MetroParks (via Herrera Environmental Consultants), Tacoma, WA. [PI and sole author]

**Gawel**, J.E., and C. Wu\*. 2017. *Lake Kapowsin Data Report*. Technical report prepared for the WA Department of Natural Resources, Olympia, WA. [PI and lead author]

Park, S., J.E. **Gawel**, M. Milne, J. Turk, C. King, and R. Rigg\* (authors not named in report, relative order determined by Gawel). 2017. *Waughop Lake Management Plan*. Technical report prepared for the City of Lakewood, Lakewood, WA. [co-PI and lead co-author; lead for all data collection and chemical analyses]

**Gawel**, J.E., H. Jennings\*, A. Sonoqui\*, S. Ayers\*, S. Remington, C. Hancock\*, K. Wada\*, B. Mason, J. Guenther\*, and C. McAllister\*. 2011. *Hydrology and Nutrient Budget for Wapato Lake, Tacoma, WA*. Technical Report prepared for the City of Tacoma, Tacoma, WA, 24 pp. [PI and sole author]

**Gawel**, J.E., and B. Mason. 2008. *Waughop Lake Sediment Phosphorus Study*. Technical Report prepared for the City of Lakewood, Washington, 2 pp. [PI and lead author]

**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. [co-PI and lead author]

## **DOCUMENTARY VIDEOS (\*undergraduate student)**

**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*. <https://www.youtube.com/watch?v=wUrrBAIWSEo&t=33s> [PI and lead creative effort; writer and producer]

**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*. <https://www.youtube.com/watch?v=cFi5WbIevAQ> [PI and lead creative effort; writer and producer]

## **EDITOR-REVIEWED CONFERENCE PROCEEDINGS PUBLICATIONS (\*undergraduate student)**

Horner, R.A., C.L. Greengrove, J.R. Postel, J.E. **Gawel**, K.S. Davies-Volumn, 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. [co-PI with Greengrove, Horner, and Davies-Vollum; lead on metals analysis]

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. [PI and lead author]

**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. [PI and lead author]

**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. [co-PI and lead author]

## 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/POD CASTS

**Gawel**, J.E., E. Hull, M. Barajas, K. Burkart, S. Fung, A. Horner-Devine, R. Neumann. 2019. Arsenic mobility and bioavailability in South King County lakes. *Waterline*, August 2019: <http://www.walpa.org/waterline/september-2019/arsenic-mobility-and-bioavailability-in-south-king-county/>

**Gawel**, J.E., P. Barrett, R. Neumann, A. Endresen, E. Hull, A. Kedir, and C. King. 2016. Arsenic in lakes in the Puget Sound Lowlands: mobility and bioavailability 30 years after smelter closure. *Waterline*, June 2016: <http://www.walpa.org/waterline/june-2016/arsenic-in-lakes-in-the-puget-sound-lowlands-mobility-and-bioavailability-30-years-after-smelter-closure/>

**Gawel**, J.E. 2014. What role do floating logs play in lake ecology? *Waterline*, September 2014: <http://www.walpa.org/waterline/september-2014/what-role-do-floating-logs-play-in-lake-ecology/>

**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/>.

## CONFERENCE PRESENTATIONS (\*undergraduate student, \*\*graduate student, first name is presenter)

Alexander\*, A., J. Ray\*, E. Hadnagy, J.E. **Gawel**. 2025. Reducing human and ecological arsenic health risk in an urban lake using lanthanum modified bentonite. Poster presented at the Washington State Lake Protection Association Conference, October 8-10, 2025, Moses Lake, WA.

Vinogradova\*, S., R. McElroy\*, J.E. **Gawel**. 2024. Using lanthanum modified bentonite to immobilize arsenic in lake sediments. Poster presented at the Society for Freshwater Science – PNW Chapter Conference, Oct. 23-24, 2024, Olympia, WA.

**Gawel**, J.E., R.B. Neumann. 2024. Arsenic mobilization, bioavailability, and human health risk in shallow urban lakes. Talk presented at the Society for Freshwater Science – PNW Chapter Conference, Oct. 23-24, 2024, Olympia, WA.

Hall, T.\*., J.E. **Gawel**. 2024. Arsenic-related human health risk from consumption of *Doryteuthis opalescens* (market squid) in Puget Sound, WA. Poster presented at the South Sound Science Symposium, Oct. 16, 2024, Shelton, WA.

Vinogradova\*, S., R. McElroy\*, J.E. **Gawel**. 2024. Using lanthanum modified bentonite to immobilize arsenic in lake sediments. Poster presented at the OLA/WALPA Joint Lakes Conference, Oct. 9-11, 2024, Portland, OR.

Lafferty\*, V., J. Heinlen\*, G. Mulukutla, E. Hadnagy, J.E. **Gawel**. 2024. Predicting algae blooms by remote sensing in Washington lakes. Poster presented at the OLA/WALPA Joint Lakes Conference, Oct. 9-11, 2024, Portland, OR.

Mulukutla, G., V. Lafferty\*, J. Heinlen\*, R. Harris\*, J. Hardy, J.E. **Gawel**, E. Hadnagy. 2024. Remote sensing as a tool to understand harmful algal blooms in Western Washington lakes. Talk presented at the OLA/WALPA Joint Lakes Conference, Oct. 9-11, 2024, Portland, OR.

Lafferty\*, V., J. Heinlen\*, E. Hadnagy, J.E. **Gawel**, G. Mulukutla. 2024. Evaluation of remote sensing based monitoring of lake water quality in Washington State. Poster presented at the UWT SET Research Showcase, March 1, Tacoma, WA.

Zalutskiy\*, V., A. Gardell, J.E. **Gawel**, S. Alaei. 2023. Characterization of freshwater lake microbiomes impacted by long-term arsenic exposure. Poster presented at the American Society for Microbiology NW Regional Meeting, November 10-11, Portland, OR.

[INVITED PLENARY KEYNOTE] **Gawel**, J.E. 2023. Community-engaged research in lakes with undergraduates: bridging basic science, education, and community needs. Invited plenary keynote talk for the Washington State Lake Protection Association Conference, October 4-6, 2023, Tacoma, WA.

**Gawel**, J.E., J. Berglund\*, N. Desta\*, D. Holycross\*, J. Lai\*, M. Matous\*, K. Noakes\*, K. Sacco\*, D. Steen\*, D. Drevdahl. 2023. Surveying fish consumption in smaller lakes for human health risk assessment and communication. Talk presented at the Washington State Lake Protection Association Conference, October 4-6, 2023, Tacoma, WA.

Hadnagy, E., G. Mulukutla, J.E. **Gawel**, J. Hardy. 2023. Looking between clouds: examining the efficacy of remote sensing as a tool to monitor for harmful algal blooms in King and Pierce County lakes. Poster presented at the Washington State Lake Protection Association Conference, October 4-6, 2023, Tacoma, WA.

Alaei, S., N. Laureta\*, S. Jama\*, A. Gardell, J.E. **Gawel**. characterizing the impacts of arsenic contamination on freshwater lake microbiomes. Talk presented at the Washington State Lake Protection Association Conference, October 4-6, 2023, Tacoma, WA.

Schuler\*, M., and J.E. **Gawel**. 2023. Using microcosms to estimate internal loading of phosphorus in Spanaway Lake. Poster presented at the Washington State Lake Protection Association Conference, October 4-6, 2023, Tacoma, WA.

Lipphardt\*, K., J.E. **Gawel**. The impact of nearshore recreational activities on arsenic exposure in contaminated lakes: a study of sediment disturbance and water quality. Poster presented at the Washington State Lake Protection Association Conference, October 4-6, 2023, Tacoma, WA.

**Gawel**, J.E., K. Lipphardt\*, S.R. Fung\*\*, A.R. Horner-Devine, R.B. Neuman. 2023. Arsenic mobilization, bioavailability, and human health risk in shallow urban lakes. Poster presented at the 2023 ASLO Joint Aquatic Sciences Conference, June 4-9, 2023, Mallorca, Spain.

Lipphardt\*, K., J.E. **Gawel**. The impact of nearshore recreational activities on arsenic exposure in contaminated lakes: a study of sediment disturbance and water quality. Abstract of poster presented at the 2023 ASLO Joint Aquatic Sciences Conference, June 4-9, 2023, Mallorca, Spain.

Germeau\*, H., and J.E. **Gawel**. 2023. Quantifying the spread and ecological impacts of the New Zealand mudsnail (*Potamopyrgus antipodarum*) on Spirit Lake, Mount St. Helens National Volcanic Monument. Student poster presented at The 26<sup>th</sup> Annual University of Washington Undergraduate Research Symposium, May 19, 2023, Seattle, WA.

Denham\*, H., and J.E. **Gawel**. 2023. Impact of dry deposition on nutrient inputs to Spirit Lake. Student poster presented at The 26<sup>th</sup> Annual University of Washington Undergraduate Research Symposium, May 19, 2023, Seattle, WA.

**Gawel**, J.E. 2023. Colonization and trophic integration of the New Zealand Mud Snail in Spirit Lake, Mount St. Helens, WA. Talk presented at the 2023 Mount St. Helens Aquatic Research Mini-Symposium, March 27, 2023, VIRTUAL.

**Gawel**, J.E. 2023. Human health risk from fish consumption in arsenic contaminated lakes in Western Washington. Abstract of talk presented at the 2023 US EPA National Fish Forum, February 28-March 9, 2023, VIRTUAL.

**Gawel**, J.E., J. Rynning\*\*, E.A. Hull, K. Lipphardt\*. 2022. Human health risk from arsenic exposure during nearshore play in three Washington lakes. Abstract of talk presented at the Washington State Lake Protection Association Conference, October 19-21, 2022, Richland, WA.

Fung\*\*, S.R., E.A. Hull, A. Horner-Devine, R. Neumann, J.E. **Gawel**. Short-term patterns of summer arsenic cycling in a temperate, polymictic lake. Abstract of talk presented at the Washington State Lake Protection Association Conference, October 19-21, 2022, Richland, WA.

Germeau\*, H., J.E. **Gawel**. Quantifying the impacts of New Zealand mudsnail on the ecology of Spirit Lake, Mount St. Helens National Volcanic Monument. Abstract of poster presented at the Washington State Lake Protection Association Conference, October 19-21, 2022, Richland, WA.

Denham\*, H., J.E. **Gawel**. Impact of dry deposition on nutrient inputs to Spirit Lake, Mount St. Helens National Volcanic Monument. Abstract of poster presented at the Washington State Lake Protection Association Conference, October 19-21, 2022, Richland, WA.

Myers, S.R., M. Smith\*, W. Cranston\*, C.M. Crisafulli, K. Fox-Dobbs, J.E. **Gawel**. 2022. Colonization and Trophic Integration of the New Zealand Mud Snail in Spirit Lake, Mount St. Helens. Talk presented at the Joint Aquatic Sciences Meeting, May 14-20, 2022, Grand Rapids, MI.

Ramirez Miralda\*, M., E.A. Hull, J. Stovall\*, C. Espinoza\*, D. Culbert\*, S. Jama\*, J.E. **Gawel** and S.R. Alaei. 2022. Development of an experimental system for studying arsenic bioaccumulation in periphyton and its consequences on the physiology of grazing invertebrates. Abstract of poster presented at the ASM Microbe Conference, June 9-13, 2022, Washington, DC.

Fricke\*\*, R., S. Bogstie\*, L. Martin\*, A. Shinneman, J.E. **Gawel**, J. Olden. Public lake use and access barriers across Washington lakes. Abstract of talk presented at the Washington State Lake Protection Association Conference, October 20-22, 2021, VIRTUAL.

Cranston\*, W., K. Fox-Dobbs, C. Crisafulli, J.E. **Gawel**. The role of an invasive snail in the aquatic food web at Spirit Lake, Mount St. Helens. Abstract of talk presented at the Washington State Lake Protection Association Conference, October 20-22, 2021, VIRTUAL.

Smith\*, M., C. Crisafulli, J.E. **Gawel**. Mapping the spread and ecological impacts of invasive New Zealand mudsnails in Spirit Lake. Abstract of talk presented at the Washington State Lake Protection Association Conference, October 20-22, 2021, VIRTUAL.

Gallagher\*, M., A. Shinneman, J.E. **Gawel**, A. Luchetto\*, K. Fox-Dobbs. Comparing 40-year sediment records of aquatic ecosystem evolution in two large lakes in the blast zone of Mount St. Helens. Abstract of talk presented at the Washington State Lake Protection Association Conference, October 20-22, 2021, VIRTUAL.

Martin\*, L., S. Bogstie\*, R. Fricke\*\*, J. Olden, A. Shinneman, J.E. **Gawel**, Assessing socioeconomic and temporal patterns of cultural ecosystem services provided by King County lakes. Abstract of poster presentation at the Washington State Lake Protection Association Conference, October 20-22, 2021, VIRTUAL.

Bogstie\*, S., L. Martin\*, R. Fricke\*\*, J. Olden, J.E. **Gawel**, A. Shinneman, Assessing spatiotemporal patterns of cultural ecosystem services provided by North King and Snohomish County lakes. Abstract of poster presentation at the Washington State Lake Protection Association Conference, October 20-22, 2021, VIRTUAL.

Fung\*\*, S.R., E.A. Hull, K.A. Burkart, J.E. **Gawel**, A.R. Horner-Devine, R.B. Neumann. Impacts of stratification and mixing patterns on arsenic mobilization and transfer in a shallow, urban lake. Abstract of talk presented at the Association for the Sciences of Limnology and Oceanography Aquatic Sciences Meeting, June 22-27, 2021, VIRTUAL.

Hull, E.A., R. Stiling\*\*, M. Barajas, B.P. Jackson, R.B. Neumann, J.D. Olden, J.E. **Gawel**. 2021. Trophic transfer of arsenic in lake food webs. Abstract of talk presented at the Association for the Sciences of Limnology and Oceanography Aquatic Sciences Meeting, June 22-27, 2021, VIRTUAL.

**Gawel**, J.E., E.A. Hull, M. Barajas, K.A. Burkart\*, S.R. Fung\*\*, B.P. Jackson, P.M. Barrett, R.B. Neumann, J.D. Olden. 2020. Human health risk from consumption of aquatic species in arsenic-contaminated shallow urban lakes. Abstract of poster presented at the 2020 Superfund Research Program Annual Meeting, December 14-15, 2020, VIRTUAL.

Fung\*\*, S., E.A. Hull, K. Burkart, M. Barajas, A.R. Horner-Devine, J.E. **Gawel**, R.B. Neumann. Impacts of stratification and mixing patterns on arsenic mobilization and health risks in urban lakes. Student poster presented at the 2020 Superfund Basic Research Annual Meeting, December 14-15, 2020, VIRTUAL.

**Gawel**, J.E., E.A. Hull, M. Barajas, K.A. Burkart\*, S.R. Fung\*\*, B.P. Jackson, R.B. Neumann, J.D. Olden. 2020. Arsenic mobility, biotic uptake, and human health risk from consumption of aquatic species in contaminated shallow urban lakes. Abstract of talk presented at the North American Lake Management Society Annual Conference, November 16-20, 2020, VIRTUAL.

Norberg, S., K. Burkart\*, J.E. **Gawel**. 2020. Nutrient Removal from an Urban Lake Using an Algal Turf Scrubber. Abstract of talk presented at the Washington State Lake Protection Association Conference, October 14-16, 2020, VIRTUAL.

Barajas, M., E.A. Hull, K.A. Burkart\*, S.R. Fung\*\*, B.P. Jackson, R.B. Neumann, J.D. Olden, J.E. **Gawel**. Human health risk from consumption of aquatic species in arsenic contaminated shallow urban lakes. Abstract of talk presented at the Washington State Lake Protection Association Conference, October 14-16, 2020, VIRTUAL.

Neumann, R.B., P.M. Barrett, E. Hull, S. Fung\*\*, K. Burkart\*, C.E. King, O. Hargrave\*, A.R. Horner-Devine, J.D. Olden, J.E. **Gawel**. 2019. Legacy arsenic contamination in urban lakes: the unique vulnerability of shallow weakly-stratified lakes. Abstract of talk presented at the American Geophysical Union Conference, Dec 9-13, 2019, San Francisco, CA.

Fung\*\*, S., A.R. Horner-Devine, J.E. **Gawel**, R.B. Neumann. Vertical flux of arsenic from lakebed sediments: external forcing mechanisms and mixing patterns. Student poster presented at the 2019 Superfund Basic Research Annual Meeting, Nov 18-20, 2019, Seattle, WA.

Barajas, M., E. Hull, K. Burkart\*, R. Pendergrass\*, S. Kim\*, J. Olden, J.E. **Gawel**. 2019. Arsenic uptake in crayfish and snails from ASARCO impacted lakes in Western Washington. Abstract of talk presented at the Washington State Lake Protection Association Conference, Oct 30-Nov 1, 2019, Chelan, WA.

Burkart\*, K., M. Barajas, E. Hull, J.E. **Gawel**, Examining arsenic transfer from water to periphyton and grazers in contaminated urban lakes. Student poster presented at the Washington State Lake Protection Association Conference, Oct 30-Nov 1, 2019, Chelan, WA.

Matulich\*, A., K. Burkart\*, J. Vincent, J.E. **Gawel**, The role of periphyton community constituents in arsenic speciation in freshwater lakes. Student poster presented at the Washington State Lake Protection Association Conference, Oct 30-Nov 1, 2019, Chelan, WA.

Moore, E. J.E. **Gawel**, K. Crudge\*, and K. Conway\*. 2019. Waste Not, Want Not: How Campus Waste Reduction Becomes Part of the Circular Economy. Abstract of poster presented at the Association for the Advancement of Sustainability in Higher Education, Oct 27-30, 2019, Spokane, WA.

Moore, E., E. Bayer, and J.E. **Gawel**. 2019. Teaching at the edge of the apocalypse. Abstract of workshop presented at the WA/OR Higher Education Sustainability Conference, Feb 25-27, 2019, Seattle, WA.

Moore, E., E. Bayer, E. Bruch, and J.E. **Gawel**. 2019. Teaching at the edge of the apocalypse. Abstract of workshop presented at the Fifteenth International Conference on Environmental, Cultural, Economic & Social Sustainability, Jan 17-19, 2019, Vancouver, BC, Canada.

Wu\*, C., and J.E. **Gawel**, Measuring biological stress from metals in Puget Sound mussels. Student poster presented at the South Sound Science Symposium, Oct 16, 2018, Squaxin Island Nation.

Barajas\*, M., and J.E. **Gawel**, Arsenic uptake in crayfish and snails from ASARCO impacted lakes in western Washington. Student poster presented at the OLA/WALPA Joint Lakes Conference, Sept 26-28, 2018, Portland, OR.

Burkart\*, K., and J.E. **Gawel**, Arsenic uptake in submerged macrophytes and periphyton in contaminated lakes in the Puget Sound region. Student poster presented at the OLA/WALPA Joint Lakes Conference, Sept 26-28, 2018, Portland, OR.

Hite\*, P., and J.E. **Gawel**, The hunt for arsenic remobilization in candidate shallow lakes downwind of the ASARCO smelter. Student poster presented at the OLA/WALPA Joint Lakes Conference, Sept 26-28, 2018, Portland, OR.

Hogan\*, N., and J.E. **Gawel**, Examination of arsenic accumulation in benthic midge larvae (*Chironomus cloacalis*) in post-ASARCO smelter contaminated lakes. Student poster presented at the OLA/WALPA Joint Lakes Conference, Sept 26-28, 2018, Portland, OR.

Meyer\*, J., and J.E. **Gawel**. Chemical composition of sediment contributions from floating logs on Spirit Lake. Student poster presented at the OLA/WALPA Joint Lakes Conference, Sept 26-28, 2018, Portland, OR.

Hull, E., and J.E. **Gawel**. 2018. Arsenic cycling and ecosystem health in urban lakes: A Puget Sound case study. Abstract of talk presented at the OLA/WALPA Joint Lakes Conference, Sept 26-28, 2018, Portland, OR.

**Gawel**, J.E., P. Barrett, E. Hull, K. Burkart\*, O. Hargrave\*, J. McLean\*, R.B. Neumann. 2018. Arsenic bioavailability is greater in shallow polymictic urban lakes than deep stratified lakes: flux rates and the involvement of plankton in arsenic cycling. Abstract of talk presented at the Association for the Sciences of Limnology and Oceanography Summer Meeting, June 10-15, 2018, Victoria, BC.

[INVITED] **Gawel**, J.E., P. Barrett, E. Hull, K. Burkart\*, O. Hargrave\*, J. McLean\*, R.B. Neumann. 2017. Lake mixing regime influences arsenic transfer from sediments into the water column and uptake in plankton. Abstract of talk presented at the American Geophysical Union Conference, December 11-15, 2017, New Orleans, LA.

**Gawel**, J.E., J. Ramstack Hobbs. 2017. Washington Community Allied Lake Monitoring (WA CALM): a collaborative state-wide volunteer lake monitoring pilot. Abstract of talk presented at the Washington State Lake Protection Association 30<sup>th</sup> Annual Conference, October 11-13, 2017, Spokane, WA.

Burkart\*, K., E. Hull, and J.E. **Gawel**. Influences of lake mixing regime on arsenic transfer from sediments into the water column and bioaccumulation in plankton. Talk presented at the Washington State Lake Protection Association 30<sup>th</sup> Annual Conference, October 11-13, 2017, Spokane, WA.

Strecker, A.L., M. Holgerson, C. Crisafulli, J.E. **Gawel**. 2017. Primary succession and community assembly in ponds created by the Mount St. Helens eruption. Abstract of talk presented at the Ecological Society of America Conference, August 6-11, 2017, Portland, OR.

Wu\*, C., and J.E. **Gawel**. 2017. Summer water quality and implications for fisheries management in Lake Kapowsin, Washington. Student poster presented at The Twentieth Annual University of Washington Undergraduate Research Symposium, May 19, 2017, Seattle, WA.

Barrett, P. M., E. Hull, C.E. King, J.A. **Gawel**, R.B. Neumann. 2017. Bioaccumulation of arsenic in aquatic food webs of contaminated lakes in the Puget Sound lowland. Abstract of poster presented at the Association for the Sciences of Limnology and Oceanography Aquatic Science Meeting, Feb 26-Mar 3, 2017, Honolulu, HI.

Kedir\*, A., and J.E. **Gawel**. 2016. Metal uptake in midge larvae in contaminated urban lakes in the Puget Sound region. Student poster presented at The Nineteenth Annual University of Washington Undergraduate Research Symposium, May 20, 2016, Seattle, WA.

Hull\*, E., and J.E. **Gawel**. 2016. Arsenic in shallow polymictic and seasonally stratified urban lakes: mobility, bioaccumulation and ecological toxicity. Student poster presented at The Nineteenth Annual University of Washington Undergraduate Research Symposium, May 20, 2016, Seattle, WA.

Burkart\*, K., and J.E. **Gawel**. 2016. Nutrient contributions from floating logs in Spirit Lake, Mount Saint Helens National Volcanic Monument. Student poster presented at The Nineteenth Annual University of Washington Undergraduate Research Symposium, May 20, 2016, Seattle, WA.

Endresen\*, A., and J.E. **Gawel**. 2016. Phytoremediation of arsenic by aquatic plants in contaminated urban lakes in the south-central Puget Sound region. Student poster presented at The Nineteenth Annual University of Washington Undergraduate Research Symposium, May 20, 2016, Seattle, WA.

Knutsen\*, T., and J.E. **Gawel**. 2016. Improving usability of the Puyallup River Outreach Project website to decrease bounce rate. Student poster presented at The Nineteenth Annual University of Washington Undergraduate Research Symposium, May 20, 2016, Seattle, WA.

**Gawel**, J.E., C. King\*, R. Rigg\*, M. Milne, S. Park, J. Turk, and G. Vigoren. 2016. Hydrologic and nutrient budgets to support the Waughop Lake management plan. Abstract of talk presented at the Washington State Lake Protection Association 29<sup>th</sup> Annual Conference, October 5-7, 2016, Bellingham, WA.

Hull\*, E.A., J.E. **Gawel**, P.M. Barrett, and R.B. Neumann. 2016. Arsenic in shallow polymictic and seasonally stratified urban lakes: mobility, bioaccumulation and ecological toxicity. Abstract of talk presented at the Washington State Lake Protection Association 29<sup>th</sup> Annual Conference, October 5-7, 2016, Bellingham, WA.

Endresen\*, A., and J.E. **Gawel**. 2016. Phytoremediation of arsenic by aquatic plants in contaminated urban lakes in the South-Central Puget Sound region. Poster presented at the Washington State Lake Protection Association 29<sup>th</sup> Annual Conference, October 5-7, 2016, Bellingham, WA.

Strecker, A.L., M. Holgerson, C. Crisafulli, J.E. **Gawel**. 2017. Primary succession and community assembly in ponds created by the Mount St. Helens eruption. Abstract of talk presented at The Association for the Sciences of Limnology and Oceanography Summer Meeting, June 5-10, 2016, Santa Fe, NM.

**Gawel**, J.E. 2015. The new Spirit Lake: hydrology, nutrient cycling and biological productivity. Abstract of talk presented at the 2015 WALPA Annual Conference, October 26-28, 2015, Walla Walla, WA.

Burkart\*, K., and J.E. **Gawel**. 2015. Nutrient contributions from floating logs in Spirit Lake, WA. Student poster presented at the 2015 WALPA Annual Conference, October 26-28, 2015, Walla Walla, WA.

Hull\*, E., and J.E. **Gawel**. 2015. Mobility and bioaccumulation of arsenic in shallow unstratified and seasonally stratified urban lakes. Student poster presented at the 2015 WALPA Annual Conference, October 26-28, 2015, Walla Walla, WA.

King\*, C., R. Rigg\*, and J.E. **Gawel**. 2015. Determining sources of nutrients in a shallow, eutrophic, kettle lake in Lakewood, Washington. Student poster presented at the 2015 WALPA Annual Conference, October 26-28, 2015, Walla Walla, WA. [Best Undergraduate Student Poster Award].

Rawley\*, H., and J.E. **Gawel**. 2015. Nitrogen cycling in the post-eruption Spirit Lake, Mount St. Helens National Volcanic Monument. Student poster presented at the 2015 WALPA Annual Conference, October 26-28, 2015, Walla Walla, WA.

Suter\*, C., and J.E. **Gawel**. 2015. Nutrient and hydrologic budgets of Wapato Lake, Tacoma. Student poster presented at The Eighteenth Annual University of Washington Undergraduate Research Symposium, May 15, 2015, Seattle, WA.

**Gawel**, J.E. 2014. The New Spirit lake: current hydrology and nutrient cycling in a disturbed ecosystem. Abstract of talk presented at the 2014 WALPA Annual Conference, September 30-October 2, 2014, Chelan, WA.

Reamer\*, S., and J.E. **Gawel**. 2014. Role of log mat biofilm in nutrient cycling of Spirit Lake, Mount St. Helens National Volcanic Monument. Student poster presented at the 2014 WALPA Annual Conference, September 30-October 2, 2014, Chelan, WA. *[Best Undergraduate Student Poster Award]*

Palumbo\*, J., and J.E. **Gawel**. 2014. Analysis of new organic sediment material in Spirit Lake, Mount St. Helens National Volcanic Monument. Student poster presented at the 2014 WALPA Annual Conference, September 30-October 2, 2014, Chelan, WA.

**Gawel**, J.E. 2014. Remobilization of legacy arsenic from lake sediments in the vicinity of the ASARCO smelter in Ruston, Washington, decades after closure. Abstract of talk presented at the 2014 Joint Aquatic Sciences Meeting, May 18-23, 2014, Portland, OR.

Dolan\*, J. M., and J.E. **Gawel**. 2014. Monitoring metal stress in Puget Sound using metallothionein production in mussels in the nearshore. Student poster presented at the 2014 Joint Aquatic Sciences Meeting, May 18-23, 2014, Portland, OR.

Ehle\*, A., and J.E. **Gawel**. 2014. Trophic status of Wapato Lake, Tacoma, Washington. Student poster presented at The Seventeenth Annual University of Washington Undergraduate Research Symposium, May 16, 2014, Seattle, WA.

Hunter\*, S., E. Cline and J.E. **Gawel**. 2014. Stress responses from metal pollutants of *Picea abies* (red spruce) and mycorrhizal fungi in forest communities along an elevational gradient within the Appalachian Mountains. Student poster presented at The Seventeenth Annual University of Washington Undergraduate Research Symposium, May 16, 2014, Seattle, WA.

**Gawel**, J.E., J. Dolan\*, J. Lanksbury and J. West. 2014. Monitoring metal stress in Puget Sound using metallothionein production in mussels in the nearshore. Abstract of talk presented at the 2014 Salish Sea Ecosystem Conference, April 30-May 2, Seattle, WA.

**Gawel**, J.E. 2013. The Long-Term Impact of Metal Smelting Operations on Arsenic Availability in Urban Lakes of the South-Central Puget Sound Region. Abstract of talk presented at the 2013 WALPA/OLA Joint Lakes Conference, October 16-18, 2013, Vancouver, WA.

Ehle\*, A., L. Hagen\*, and J.E. **Gawel**. 2013. Trophic Status of Two Shallow Urban Lakes in Pierce County, Washington. Student poster presented at the 2013 WALPA/OLA Joint Lakes Conference, October 16-18, 2013, Vancouver, WA.

McCartha\*, M., K. Best, B.J. Becker, and J.E. **Gawel**. 2013. Metallothionein as a Bio-indicator of Metal Toxicity in South Puget Sound. Student talk presented at The Sixteenth Annual University of Washington Undergraduate Research Symposium, May 17, 2013, Seattle, WA.

Vittetoe\*, J., E. Cline, J.E. **Gawel**, and G. Ettl. 2013. Foliar Uptake of Toxic Metals and Stress Responses of Pine Seedlings from Biosolids-Treated Sites at Pack Forest, WA. Student poster presented at The Sixteenth Annual University of Washington Undergraduate Research Symposium, May 17, 2013, Seattle, WA.

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.

**Gawel**, J.E. 2012. Developing a Data-intensive Nutrient Budget for Wapato Lake, Tacoma, Washington, with an Eye towards Future Management. Abstract of poster presented at the 2012 WALPA Annual Conference, October 24-26, 2012, Wenatchee, 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.

**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.

Klein\*, E., J.E. **Gawel** and C. Strowbridge\*. 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.

**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.

Nguyen\*, Q.N., J.E. **Gawel** and E. Cline. 2009. Phytochelatins 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 Phytochelatins. Student poster presented at The Eleventh Annual University of Washington Undergraduate Research Symposium, May 16, 2008, Seattle, WA.

Horner, R.A., J.R. Postel, J.E. **Gawel**, C.L. Greengrove, S. Davies-Vollum, A.M. Cox\*\*, J. Hubert\*, A. Abrahamson\*, J. Masura, and B.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 catanella* 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.

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.

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.

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 Eighth 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.

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.

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. 2003. 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.

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.

#### GRANTS RECEIVED

2025-2026 UWT Founders Endowment Award (\$10,000) – “Reducing Human and Ecological Health Risk in an Urban Pond: A Science and Engineering Collaboration.”

2024 Pierce County (\$1,568) – “Clover Creek TMDL Alternative: Phase 1.”

2023-2024 UW Royalty Research Fund (\$39,944) – “Characterizing the Impacts of Arsenic Contamination on Freshwater Lake Microbiomes.”

2023-2024 WA Water Research Center (\$28,578) – “Evaluation of Remote Sensing Based Monitoring of Lake Water Quality in WA State.”

2023-2024 UWT Founders Endowment Award (\$4,000) – “Characterizing the Impacts of Arsenic Contamination on Freshwater Lake Microbiomes.”

2023 UWT Husky Sustainability Fund (\$4,229) – “UWT Waste Sorting.”

2023 Pierce County (\$16,959) – “Spanaway Lake Management Plan Update.”

2022-2023 SIAS Scholarship and Teaching Fund (\$5,000) – “Spirit Lake: Increasing Access to Field Research Opportunities for Undergraduates.”

2022-2023 Center for Exposures, Diseases, Genomics, and Environment (EDGE) Pilot Project Grant (\$40,000) – co-investigator on “Metagenomic Approach to Decipher Mechanisms of Cadmium Neurotoxicity.”

2021-2022 SIAS Scholarship and Teaching Fund (\$4,940) – “Mapping the Spread and Ecological Impacts of Invasive New Zealand Mudsnaails in Spirit Lake.”

2021	UWT Community Engagement Faculty Fellow (\$10,000) – “Assessing Access and Cultural Ecosystem Service Needs for Washington Lakes.”
2020-2021	Pierce County (\$27,279) – “Clarks Creek sediment oxygen demand study.”
2017-2022	National Institutes of Environmental Health Sciences (\$1,954,649) – co-PI on “Arsenic in Shallow Unstratified and Seasonally Stratified Urban Lakes: Mobility, Bioaccumulation and Ecological Toxicity”
2020-2021	SIAS Scholarship and Teaching Fund (\$5,000) – “Assessing arsenic toxicity in a collaboration with experts in New England.”
2019	City of Tacoma Make a Splash Grant (\$4,000) – “Algae bio-filtration pilot study.”
2019	SIAS Interdisciplinary Teaching and Scholarship Collaboration grant (\$6,000) – “Experiencing the literary and natural history of the Pacific Northwest wilderness: an interdisciplinary study away course proposal.”
2019	SIAS Scholarship and Teaching Fund (\$4,850) – “Arsenic transfer from water into periphyton and snails in contaminated urban lakes.”
2018	City of Tacoma Sustainability Grant (\$3,926) – “UWT Waste Reduction Campaign.”
2018	SIAS Scholarship and Teaching Fund (\$4,900) – “Ecology of Floating Woody Debris in Spirit Lake.”
2018	Pierce County (\$4,632) – “Clarks Creek Restoration Plan – Implementation Phase I”
2018	Metropolitan Park District of Tacoma (\$20,543) – “Wapato Lake Alum Treatment Monitoring – Phosphorus Budget”
2018	The Russell Family Foundation Puyallup River Initiative (\$14,500) – SEARCH: Science Education through Authentic Research Collaboration with Higher-ed
2017	SIAS Research and Teaching Funds (\$5,486) – “Undergraduate Research on Metal Toxicity in Aquatic Organisms.”
2017	Metropolitan Park District of Tacoma (\$7,756) – “Wapato Lake Alum Treatment Monitoring – Initial Phase”
2017	The Russell Family Foundation Puyallup River Initiative (\$16,000) – “YEAR 3: Environmental Education Community of Interest: School district model for implementing environmental education throughout the watershed.”
2016	WA Dept. of Natural Resources (\$6,800) – “Lake Kapowsin Water Quality Monitoring.”
2016	SIAS Research and Teaching Funds (\$1,707) – “Arsenic v. Phosphorus Competition in Low-Nutrient Marine Waters.”
2016	SIAS Research and Teaching Funds (\$2,500) – “Ecosystem effects of large woody debris in montane lake ecosystems.”
2016	The Russell Family Foundation Puyallup River Initiative (\$6,700) – “YEAR 2: Environmental Education Community of Interest: Higher Education/K-12 Research Partnerships Using NGSS.”
2016	IAS Support Funds (\$4,000) – “Arsenic in Urban Lakes: Mobility, Bioaccumulation and Toxicity.”
2015	National Institutes of Environmental Health Sciences (\$432,000) – co-PI on “Arsenic in Shallow Unstratified and Seasonally Stratified Urban Lakes: Mobility, Bioaccumulation and Ecological Toxicity.”
2015	IAS Support Funds (\$1,750) – “IT and SIAS Collaborative Learning Project: Spirit Lake.”
2015	IAS Support Funds (\$2,500) – “Large woody debris (LWD) as habitat and a source of nutrients in montane lake ecosystems.”
2015	UW Green Seed Fund (\$48,959) – co-investigator on “Carbon Challenge: Footprint Reduction through Curricular Development and Community Building.”
2015	UW Green Seed Fund (\$35,915) – co-investigator on “UWT Husky Lines.”
2015	The Russell Family Foundation Puyallup River Initiative (\$18,000) – “Environmental Education Community of Interest: Higher Education/K-12 Research Partnerships Using NGSS.”
2014	IAS Support Funds (\$4,000) – “Metal uptake and toxicity in plankton and aquatic invertebrates in arsenic-contaminated lakes.”
2014	City of Lakewood (\$42,433) – “Waughop Lake Management Plan.”
2013	IAS Funds to Support Research (\$4,418) – “MusselWatch: using metallothioneins as bioindicators of metal stress in Puget Sound mussels.”
2013	Pierce County Surface Water Management (\$1,997) – “Wapato Lake Phosphorus Study.”
2013	IAS Funds to Support Research (\$4,732) – “Geochemical Controls on Metal Bioavailability in Lakes.”
2013	IAS Funds to Support Research (\$5,000) – “Metal Stress and Forest Decline along an Elevational Gradient on Whiteface Mountain, NY.”
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.”
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	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	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) – “Phytochelatins 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) – “Phytochelatins as bioindicators of the role of metal stress in forest decline in Norway.”
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 <i>Alexandrium</i> cysts in Puget Sound, WA.”
2004	National Science Foundation Regional Workshop (paid participation) – “New approaches and techniques for teaching science: addressing environmental problems to stimulate undergraduate learning.”
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.”

#### **AWARDS/RECOGNITION**

2023	UWT Distinguished Teaching Award nominee
2022	UWT Distinguished Community Engagement Award nominee

2021	Washington Lake Protection Association Secchi Award
2019	UWT Distinguished Teaching Award nominee
2018	UW Husky Green Award – for contributions to sustainability on the UW Tacoma campus
2018	National Association of Geoscience Teachers – my class exercise, “Environmental Justice in Tacoma: A Non-Majors Qualitative Assessment of Pollution and Public Policy in the Local Community,” was accepted into NAGT’s <i>On the Cutting Edge Exemplary Teaching Activity</i> collection
2016	UWT Distinguished Community Engagement Award winner (\$1,000)
2014	UWT Distinguished Teaching Award nominee
2013	E3 Washington Green Apple Award for Formal Educator in a College/University
2013	UWT Distinguished Community Service Award nominee
2012	UW Undergraduate Research Mentor Award nominee
2011	UW Husky Green Award nomination – UWT Hood Corridor Planning Team
2011	Pierce Conservation District Stream Team Award – UWT Environmental Program
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
2009	UW Undergraduate Research Mentor Award winner (small cash award and engraving)
2005	Nominated for UWT Distinguished Teaching Award
2004	University of Washington (\$17,500) – Brotman Award for Teaching Excellence
2004	University of Washington (\$1,000) – Institute for Teaching Excellence
2004	Outstanding Student Organization Advisor (nominee) – Project Earth

#### **POPULAR PRESS RECOGNITION**

- *Lower Columbia Currents* (October 27, 2025) – *Should Spirit Lake be lowered 40 feet?*
- *The Mill Creek Review* (October 16, 2024) – *Tiny Snails Could Make Big Changes in Spirit Lake and Connected Waterways*
- *Northern Woodlands* magazine (Spring 2023) – *Forests and Lakes Remember Acid Rain. Do You?* (Appalachian research discussion)
- *EOS News* (November 29, 2022) “Understanding enhanced arsenic pollution in shallow lakes” by Marc F.P. Bierkens, <https://eos.org/editor-highlights/understanding-enhanced-arsenic-pollution-in-shallow-lakes>
- *NASA Earth Observatory: The Floating Logs of Spirit Lake* (November 1, 2021) – research discussion and quotes for NASA’s Image of the Day feature, <https://earthobservatory.nasa.gov/images/149025/the-floating-logs-of-spirit-lake>
- *KIRO 7: Scientists concerned over arsenic levels in local lakes* (September 26, 2021) – video news coverage of Hull et al. (2021) paper showing human health effects of arsenic contaminated fish in Puget Sound lakes. <https://www.kiro7.com/news/local/video-scientists-concerned-over-arsenic-levels-local-lakes/32fc8e58-74ae-4eef-9bb5-1aa666987739/>
- *After the Blast: The Ecological Recovery of Mount St. Helens* (2020, Wagner, E., University of Washington Press) – my research is the subject of a book chapter in this popular press book
- *The Daily News* (April 3, 2020) – research discussed in “Is a 'floating habitat' the key to understanding rebounding fish in Spirit Lake?” [https://tdn.com/news/local/is-a-floating-habitat-the-key-to-understanding-rebounding-fish-in-spirit-lake/article\\_e3faf489-fb86-5669-bf39-e9fd28dff196.html#tracking-source=home-top-story-1](https://tdn.com/news/local/is-a-floating-habitat-the-key-to-understanding-rebounding-fish-in-spirit-lake/article_e3faf489-fb86-5669-bf39-e9fd28dff196.html#tracking-source=home-top-story-1)
- *Paw'd Defiance* (December 2, 2019) – podcast: “Arsenic and Old Lakes,” <https://www.buzzsprout.com/265902/2210024-arsenic-and-old-lakes>
- *UW Civil and Environmental Engineering News* (October 16, 2019) – research discussed in “Lakes with a Legacy,” <https://www.ce.washington.edu/news/article/2020-01-02/lakes-legacy>
- *Keeper of the Fire* (2019) – research included in documentary by Evan Raymond Spitzer, <https://vimeo.com/271201051>
- *UW Tacoma News* (April, 26, 2019) – research discussed in “Diving for Data: Solving the Arsenic Riddle,” <http://www.tacoma.uw.edu/news/article/diving-data-solving-arsenic-riddle>
- *UW Superfund Research Program News* (May 2019) – research discussed in “Is local escargot contaminated with arsenic?,” <https://deohs.washington.edu/srp/node/116>
- *The [Longview] Daily News* (March 4, 2019) – research and teaching discussed in “Research, flood protection at odds over Spirit Lake road.”
- *The Daily Chronicle [Lewis County]* (January 24, 2019) – research and teaching discussed in “Researchers, Conservationists Raise Alarm about Proposed Road through Mount St. Helens Pumice Plain.”
- *The Whole U* (May 25, 2018) – research discussed in “Faculty Friday: Jim Gawel.”

- *News Tribune* (March 1, 2017) – research discussed in “Polluted Lake Waughop may need multimillion-dollar cleanup to halt growth of toxic algae.”
- *News Tribune* (March 9, 2016) – research discussed in “Sediment the culprit behind toxic algae at Lakewood’s Waughop Lake.”
- *News Tribune* (November 8, 2015) – quoted in *News Tribune Special Report*, “Toxic Shock: three decades after the ASARCO smelter shutdown, its legacy surprises Tacoma newcomers.”
- *CBS News* (May 18, 2015) – quoted in “35 years after Mount St. Helens eruption, nature returns.”
- *Environmental Health News* (May 2014) – quoted in “Stirring up forgotten lead: Smelters across US at risk from tornadoes, floods, quakes.”
- UW Provost’s Report (May 2014) – featured in: ”Innovators Among Us: Preparing Students for Life after Graduation” [[http://www.washington.edu/provost/files/2014/05/edtrends\\_Innovators-Among-Us-Preparing-Students-for-Life-after-Graduation.pdf](http://www.washington.edu/provost/files/2014/05/edtrends_Innovators-Among-Us-Preparing-Students-for-Life-after-Graduation.pdf)]
- *Tacoma Weekly* (March 2014) – research discussed in “Safety of lake fish in question following UWT study.”

#### **INVITED COMMUNITY ENGAGEMENT PRESENTATIONS**

2025 Harbor Terrace Senior Living, Muskegon, MI - *Lessons from Loowit: Adventure Science at Spirit Lake, Mount St. Helens National Volcanic Monument*

2023 Baby Island Saratoga Club, Langley, WA – *Lessons from Loowit: Adventure Science at Spirit Lake, Mount St. Helens National Volcanic Monument*

2023 PSEMP Toxics Work Group, VIRTUAL – *Arsenic and Old Lakes: Human Health Risk from Legacy Pollution in Western Washington.*

2023 Judson Park Retirement Community, Federal Way, WA – *Arsenic and Old Lakes: Human Health Risks in Western Washington.*

2022 UW School of Aquatic and Fisheries Sciences Seminar, Seattle, WA – *Arsenic and old lakes: Human health risk from legacy pollution in western Washington.*

2022 Washington Lake Protection Association, Western WA Lakes Workshop, VIRTUAL – *Lakes 101*

2022 UW Tacoma Office of Community Partnerships, Faculty Fellows Talk, VIRTUAL - *Assessing access and cultural ecosystem service needs for Washington lakes.*

2021 UW Tacoma Office of Research STEM Lighting Talks, VIRTUAL - *Legacy arsenic in lakes: that toxic relationship that just won't go away!*

2021 UW Dept. of Environmental and Occupational Health Sciences, Environmental Health Live Webinar Series, VIRTUAL – *Legacy arsenic in lakes: that toxic relationship that just won't go away!*

2021 Steel Lake Advisory Committee, VIRTUAL - *Arsenic in Shallow Unstratified and Seasonally Stratified Urban Lakes: Mobility, Bioaccumulation and Ecological Toxicity*

2021 UW Superfund Research Program Lake Residents Meeting, VIRTUAL - *Arsenic in Shallow Unstratified and Seasonally Stratified Urban Lakes: Mobility, Bioaccumulation and Ecological Toxicity*

2020 UW Superfund Research Program Agency Stakeholders, VIRTUAL - *Arsenic in Shallow Unstratified and Seasonally Stratified Urban Lakes: Mobility, Bioaccumulation and Ecological Toxicity*

2019 Guest Lecture, University of Puget Sound, Tacoma, WA - *Shallow Urban Lakes Increase Arsenic Exposure from Legacy ASARCO Contamination*

2019 Chambers/Clover Creek Watershed Council, Parkland, WA – *Arsenic Mobility and Bioavailability in Lakes*

2019 Sheri Tonn Retirement Symposium, Pacific Lutheran University, Parkland, WA – *The Legacy of the ASARCO Smelter in King County Lakes*

2019 Steel Lake and North Lake Advisory Committees, Federal Way, WA – *The Legacy of the ASARCO Smelter in King County Lakes*

2019 King County Lake Stewardship Workshop, Sammamish, WA – *The Legacy of the ASARCO Smelter in King County Lakes*

2018 Senior University, Franke Tobey Jones, Tacoma, WA – *Lessons from Loowit: Adventure Science at Spirit Lake, Mount St. Helens National Volcanic Monument*

2018 Geosciences Seminar Series, University of Puget Sound, Tacoma, WA – *Shallow Urban Lakes Increase Arsenic Exposure from Legacy ASARCO Contamination*

2018 Steel Lake and North Lake Advisory Committees, Federal Way, WA – *Arsenic in Water and Biota in Steel and North Lakes*

2018 Senior University, Franke Tobey Jones, Tacoma, WA – *Arsenic and Old Lakes: Metal Pollution, Urbanization and the Aquatic Food Chain*

2018 UW Tacoma Environmental Seminar, Tacoma, WA – *The ASARCO Legacy: Arsenic Pollution, Urbanization, and Impacts on the Aquatic Food Chain*

2018 Lake Killarney Improvement Association, Federal Way, WA – *Update on Arsenic Lakes Project*

2018 UW Bothell Physical Sciences Seminar, Bothell, WA – *Lessons from Loowit: Changes to Nutrient Cycling and Biological Productivity in the New Spirit Lake*

2017 UW School of Aquatic and Fisheries Sciences Seminar, Seattle, WA – *Lessons from Loowit: Changes to Nutrient Cycling and Biological Productivity in the New Spirit Lake*

2017 Judson Park Retirement Community, Federal Way, WA – *Arsenic and Old Lakes: Metal Pollution, Urbanization and the Aquatic Food Chain*

2017 Judson Park Retirement Community, Federal Way – *Lessons from Loowit: Changes to Nutrient Cycling and Biological Productivity in the New Spirit Lake*

2017 UW Tacoma Strategic Plan Lightning Talks – *SEARCH: Science Education and Applied Research through Collaboration with Higher-ed*

2017 Grit City Drink and Think, Tacoma, WA – *Arsenic and Old Lakes: Metal Pollution, Urbanization and the Aquatic Food Chain*

2017 Lakewood City Council Meeting, Lakewood, WA – *Waughop Lake Management Plan*

2016 Chambers/Clover Watershed Council, Lakewood, WA – *Waughop Lake Management Plan*

2016 UWT Community Engagement Award Presentation, Tacoma, WA - *Building a K-16 Science Community through Authentic Research Collaborations*

2016 Pacific Science Center Science Café talk, Kirkland, WA – *Logs and Landslides: 10 Years of Research on Spirit Lake*

2016 Steel Lake Advisory Committee, Federal Way, WA – *Arsenic Mobility and Bioavailability in South King County Lakes*

2015 Lake Kapowsin Planning Committee Meeting, Graham, WA – *Limnology of Lake Kapowsin*

2015 Pacific Science Center Science Café talk, Tacoma, WA – *Logs and Landslides: 10 Years of Research on Spirit Lake*

2015 Graduation Speaker for SAMI high school

2014 Mount St. Helens Institute Seminar Series, Vancouver, WA – *The New Spirit Lake: Current Hydrology and Nutrient Cycling in a Disturbed Ecosystem*

2014 Mount St. Helens Institute Seminar Series, Longview, WA – *The New Spirit Lake: Current Hydrology and Nutrient Cycling in a Disturbed Ecosystem*

2014 UW Dept of Environmental and Occupational Health Sciences Seminar Series – *The Long-Term Impact Of Metal Smelting Operations On Arsenic Availability In Urban Lakes Of The South-Central Puget Sound Region.*

2013 IAS Brown Bag Seminar Series – *The Long-Term Impact of Metal Smelting Operations in Urban Lakes of the South-Central Puget Sound Region.*

2013 Grand Cinema, Science on the Screen – *Alien vs. Spirit Lake: How the 1980 eruption of Mount St. Helens completely changed the ecosystem and chemistry of Spirit Lake.*

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 UWT, Seattle, WA – Cable broadcast and webcast of “Urban Water: Sustainability in the Balance” on multiple dates (<http://www.uwtv.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 SOCIETIES**

Association for the Sciences of Limnology and Oceanography

North American Lake Management Society

Washington Lake Protection Association

## **TEACHING**

### **COURSES TAUGHT**

TCORE 102: “Sustainability for a Better Future”

TESC 201: The Science of Environmental Sustainability

TESC 301: Sustainability in Action

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

TCHEM 333/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)

TESC 495: Research Experiences for Undergraduates (research-based course)

New Zealand: Exploring Environmental Restoration in Aotearoa/New Zealand – Study Abroad

#### **GRADUATE THESES SUPERVISED**

Student Name	Degree	Academic Unit	Role	Year Completed	Title
Fung, Samantha	Ph.D.	Civil and Environmental Engineering - UW Seattle	Member	2023	<i>The effects of mixing on arsenic mobilization and transport in a shallow lake</i>
Liou, Sin-Yi	Ph.D.	Civil and Environmental Engineering - UW Seattle	GSR	2023	<i>Novel (Advanced) Oxidation and Disinfection Processes based on Reactions of Free Available Chlorine or Hydrogen Peroxide with Unconventional Activating Agents: Superoxide Radical and Non-Ferrous/Non-Cuprous Metal(Iod) Oxide Catalysts</i>
Stiling, Rebekah Ruth	M.S.	Aquatic and Fishery Sciences - UW Seattle	Member	2021	<i>Fish Resource Use and Habitat Coupling in Lake Ecosystems</i>
Rader, Robin	M.A.	Interdisciplinary Arts and Sciences - UW Tacoma	Chair	2021	<i>Magic Seed: The Case Study of Circle of Friends in Action--A Facilitative Agricultural Cooperative</i>
Smith, Daniel Neil Currie	M.A.	Interdisciplinary Arts and Sciences - UW Tacoma	Chair	2016	<i>The Sustainable Hub for Education and Demonstration.</i>
Saunders, Jaclyn K	Ph.D.	Oceanography - UW Seattle	Member	2016	<i>Evolutionary response of marine bacteria to the co-occurring pnictogens phosphorus and arsenic</i>
Holmes, H Michael	Ph.D.	Chemistry - UW Seattle	GSR	2016	<i>N/A</i>
Laakso, Alyson	M.A.	Interdisciplinary Arts and Sciences - UW Tacoma	Chair	2013	<i>Building Sustainability through Social Marketing: Encouraging Reusable Shopping Bag Use at Stadium Thriftway in Tacoma, WA - A Case Study.</i>
LaFontaine, Michelle	M.A.	Interdisciplinary Arts and Sciences - UW Tacoma	Chair	2012	<i>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.</i>
Horton, Scott P	Ph.D.	Forest Resources - UW Seattle	GSR	2008	<i>Ecology and conservation of marbled murrelets on the western Olympic Peninsula: temporal and spatial variation in inland activity and implications for forest management</i>
Roberts, Tanya	M.A.	Interdisciplinary Arts and Sciences - UW Tacoma	Chair	2007	<i>The Thea Foss Waterway Superfund Site: A Case Study in Community Involvement.</i>
Bates, Amy	M.A.	Interdisciplinary Arts and Sciences - UW Tacoma	Chair	2005	<i>Environmental Injustice: An Evaluation of Tacoma, Washington.</i>
Albaugh, Andrew	M.S.	Civil and Environmental Engineering - UW Seattle	Chair	2002	<i>Metallothionein analysis as a measure of heavy metal stress in the sea anemones <i>M. senile</i>, <i>A. elegantissima</i>, and <i>A. artemisia</i> in Puget Sound, WA.</i>
MacLaughlin, Kathleen J.	M. Eng.	Civil and Environmental Engineering - MIT	Member	1999	<i>An Investigation of Arsenic in Spy Pond.</i>

#### **SERVICE**

#### **DIVISION/SCHOOL**

Tenure/Promotion/Reappointment Review Committees:

- Reappointment Review Committee for Tawanda Chivese (2026)
- Chair, Promotion Review Committee for Bonnie Becker (2025)
- Chair, Reappointment Review Committee for Hannah Baughman (2025)
- Chair, Tenure Review Committee for Kelly Kim (2024)
- Reappointment Review Committee for Eliza Heery (2024)

- Reappointment Review Committee for Anna Lovasz (2023)
- Tenure Review Committee for Ander Erickson (2022)
- Chair, Reappointment Review Committee for Sarah Alaei (2022)
- Chair, Reappointment Review Committee for Anna Groat-Carmona (2020)
- Chair, Senior Lecturer Promotion Committee for Leighann Chaffee (2018)
- Reappointment Review Committee for Marc Nahmani (2018)
- Chair, Senior Lecturer Promotion Committee for Jeremy Davis (2017)
- Tenure Review Committee for Hyoung Lee (2017)
- Chair, Reappointment Review Committee for Megan Schwartz and Joan Bleecker (2017)
- Chair, Reappointment Review Committee for Maureen Kennedy (2017)
- Chair, Senior Lecturer Promotion Committee for Julie Masura (2016)
- Reappointment Review Committee for Danica Miller (2016)
- Tenure Review Committee for Steven Ross (2015)
- Chair, Senior Lecturer Promotion Committee for Ellen Moore (2015)
- Reappointment Review for Meg Henderson (2015)
- Reappointment Review Committee for Will McGuire (2014)
- Chair, tenure review committee for Erica Cline (2011)
- Chair, Reappointment Review Committee for Joyce Dinglasan-Panlilio (2010)
- Reappointment Review Committee for Erica Cline (2008)
- Chair, Tenure Review Committee for Siân Davies-Vollum (2006)
- Tenure Review Committee for Michael Kucher (2006)

Search Committees:

- Chair, Search Committee, Biochemistry tenure-track (2025-26)
- Chair, Search Committee, Biochemistry tenure-track (2024-25)
- Chair, Search Committee, Epidemiology tenure-track (2021-22)
- Search Committee, Biology Lecturer (2020)
- Chair, Search Committee, SIAS Coordinator of First-Year Writing (2020)
- Search Committee, Ecotoxicology tenure-track (2019-20)
- Interview Committee, SIAS Director of Finance and Operations (2019)
- Search Committee, Physics lecturer (2017-18)
- Search Committee, Assistant to the Dean (2017)
- Interview Committee, Applied Ecology tenure-track (2017)
- Chair, Search Committee, Epidemiology tenure-track (2015-16)
- Interview Committee, Neurobiology tenure-track (2016)
- Chair, Search Committee, Chemistry lecturer (2015)
- Chair, Search Committee, Groundwater Hydrology tenure-track (2014-15)
- Chair, Search Committee, Environmental Studies tenure-track (2013-14)
- Interview Committee, Freshwater Initiative tenure-track (2014)
- Search Committee, SAM Program Manager (2014)
- Search Committee, Biology lecturers (2014)
- Search Committee, Chemistry lecturer (2014)
- Search Committee, Environmental Biochemistry/Toxicology tenure-track (2012)
- Search Committee, Organic Chemistry lecturer (2012)
- Search Committee, Biology lecturers (2012)
- Interview Committee, Writing tenure-track (2011)
- Interview Committee, Mathematics tenure-track (2011)
- Chair, Search Committee, Environmental Biochemistry/Toxicology tenure-track (2009)
- Search Committee, IAS Director (2008-09)
- Chair, Search Committee, Environmental Science/Physics tenure-track (2007-08)
- Search Committee, Applied Mathematics tenure-track (2007-08)
- Search Committee, Instructional Laboratory Coordinators (2007-08)
- Chair, Search Committee, Environmental Organic Chemistry tenure-track (2006-07)
- Search Committee, Port of Tacoma Endowed Chair tenure-track (2006-07)

- Search Committee, Mathematics Coordinator tenure-track (2006-07)
- Interview Committee, International Relations tenure-track (2004-05)
- Search Committee, Geology tenure-track (2002-03)
- Interview Committee, Writing and Small Press Publishing tenure-track (2002-03)
- Search Committee, Clinical Psychology tenure-track, 2 positions (2001-02)
- Search Committee, Developmental Psychology tenure-track, 2 positions (2001-02)
- Search Committee, Environmental Science Lab Coordinator (2000)

#### Administration/Governance

- SIAS Faculty Council (2025-present)
- SAM Interim Lab Manager (2024-2025)
  - Coordinated purchase and installation of new biosafety cabinet for class use
  - Organized switch in laundry service to meet EH&S requirements
  - Worked with staff to change waste storage and pickup requests
  - Worked with staff and faculty to clean out old samples
  - Organized SAM faculty lab research meeting
- Environmental Science Major Coordinator (2023-2025)
  - Developing new Biology major with Biomed faculty (2024-2025)
  - Developing new OneHealth option with Biomed faculty (2024-2025)
  - Developing joint 310/410 bookend courses with Biomed faculty (2024-2025)
  - Revamping elective lists for all BS Environmental Science options (2024-2025)
  - Created new capstone form tied to SLOs (2024)
  - Completed the rewrite of major SLOs (2024)
  - Co-Coordinator (2022-2023)
- Associate Dean for Faculty Support and Initiatives (2018-2020)
- SIAS Faculty Advancement Task Force (2019-2020)
- American Association of Colleges and Universities conference (2020)
- Chair, SIAS Structure Task Force (2017-18)
- Chair, SIAS Faculty Council (2016-2017)
- Vice Chair, SIAS Faculty Council (2015-2016)
- SIAS Faculty Fellows on Workload Analysis with Jennifer Harris (2015)
- IAS Assistant Director (2011-2012)
- IAS Curriculum Coordinator (2010-2011)
- Environmental Sciences Program Coordinator (2006-2012)
- Concentration Coordinator for Environmental Science and Studies (2006-2012)
- IAS Faculty Council (2006-2008)

#### Mentoring

- ACCESS in STEM mentor for undergraduate student (2022-present)
- SIAS Faculty Mentor for Alison Gardell and Sarah Alaei (2019-present)
- Created new SAM Tea Time community building effort (2023-2025)
- Peer Teaching Evaluations for Hannah Baughman and Tom Koontz (2024)
- SIAS Faculty Mentor for Cynthia Howson (2019-2023)
- Peer Teaching Evaluations for Kelly Kim, Vasudha Sundaravaradan, Marc Nahmani (2022-2023)
- SIAS Faculty Mentor for Ruben Casas (2019-2020)
- Peer Teaching Evaluations for 22 UWT faculty members (2000-2019)
- SIAS Faculty Mentor for Karen Cowgill and Rose Njoroge (2018-19)

#### Ad Hoc Committees

- Pierce College-UW Tacoma STEM Transfer Initiative (2023-present)
- SAM Diversity Workgroup (2016-2017; Chair 2019-2020; Chair 2021-present)
  - Developing Equitable P&T Criteria and Processes for SAM Department (2024-2025)
  - Working to create dedicated space for SAM students (2024-2025)
    - Worked with IFM to designate 3<sup>rd</sup> floor of TPS building as SAM Study Space
    - Applied for funding for furniture, computer workstation, and printer from STFC

- Drafted SAM Guidelines for Discussing Faculty DEI Work in Promotion Narrative and Committee Report (2024)
- Created Guidelines for SAM Seminar Series and Classroom Guest Speakers (2023)
- Created new SAM DEI Initiatives webpage (2024)
- Created SAM Faculty Mentoring Program (2023)
- Environmental Science Field Course Criteria Working Group (2021)
- SAM Scholarship Committee (2018-2020)
- SAM TESC 410 working group (2017)
- Lead, SAM Diversity Working Group (2015-2016)
- Phase III, Science Building Design Committee (2008-09)
- UWT Environmental Program Alumni Survey (2008)
- IAS Faculty Morale Survey (2005)
- IAS Psychology Task Force (2004)
- UW Restoration Ecology Network – committee member (1999-2002)
- Science Building design team (1999-2002)

#### Curriculum Development

- MS Environmental Science – proposal writing and approval process lead (2023-present)
- New Zealand: Exploring Environmental Restoration in Aotearoa/New Zealand – co-created and taught new study abroad course with Dr. Avery Shinneman from UW Bothell (2023-2024)
- MS Environmental Science – Curriculum Development Working Group (2015-2016)
- Admissions and Implementation ad hoc committee for M.S. in Environmental Science (2014-2015)
- Reinventing the B.A. in Environmental Studies ad hoc committee (2014-2015)
- UWT Environmental STEM Education Center creation (2014-2015)
- Ethic of Place Conference to re-imagine the B.A. in Environmental Studies (2015)
- UWT Environmental Law and Regulations Certificate (2009)
- Developed a PARC proposal for a B.S. in Environmental Engineering with Joyce Dinglasan-Panlilio (2008-09)
- Curriculum for the Bioregion Workshop – Chemistry Curriculum Planning (2008-09)
- UWT Energy Minor – collaboration with the Institute of Technology (2008-2009)
- 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)
- IAS Writing Task Force (2002-2004)

#### CAMPUS/UNIVERSITY

##### Faculty Governance

- Chair, UW Faculty Council on Research (2023-2025; member 2022-2023)
  - Lead on Teaching Faculty Sabbatical and PI Status Policy Workgroup (2023-25) – recommendations presented to SEC; negotiated solutions with VP Academic Personnel and Faculty
  - Lead on FT Impacts on Research survey – presented to Faculty Senate (2023-25)
- UW Faculty Senate, serving as FCR Chair (2023-25)
- University Faculty Lecture Award Selection Committee (2024, 2025) – appointed by the UW President
- Chair, Task Force on APT (2022)
- Chair, UWT Research Advisory Committee (2019-2020)
- UWT Faculty Committee on Appointment, Promotion and Tenure (2013-18; Chair 2015-17)
- UWT Faculty Assembly Executive Committee (2000-02; 2015-17)
- UW Faculty Senate, IAS Representative (2003-05; 2014-17)
- *Investing in your future: generating momentum for your research agenda.* UW Junior Faculty Workshop (panelist 2010)
- UWT Faculty Affairs Committee (2000-2003; Chair 2000-2002)

##### Search Committees:

- Search Committee, UWT Senior Director of Asset Management (2025)
- Search Committee, UWT Giving Garden Coordinator (2023)
- Search Committee, UWT Student Sustainability Coordinator (2021-2022)
- Search Committee, UWT Giving Garden Coordinator and Assistants (2019-2020)
- Search Committee, UWT Sustainability Coordinator (2020)

- Search Committee, Fiscal Specialist – Office of Research (2019)
- Search Committee, Director of Academic Human Resources (2017-18)
- Search Committee, Assistant Vice Chancellor of Sponsored Research (2007)
- Search Committee, Director of Information Technology (2002)

#### Sustainability

- UW Environmental Stewardship Committee (2023-2025) – appointed by the UW President
- UW Sustainability Action Plan Executive Committee (2023-2025)
- Chancellor's Advisory Committee on Sustainability (2010-12; 2013-14; 2024-2025; Chair 2014-2020; 2021-2024)
- Co-organizer, UWT Husky Swap Meet (2019)
- Attended WA/OR Higher Education Sustainability Conference with students and staff on behalf of the Chancellor's Advisory Committee on Sustainability (2018)
- UWT Giving Garden SHED – working with MAIS student Dan Smith and students from CIVITAS and Project Earth to construct an education and outreach facility built using green construction methods (2015-2016)
- Completed installation of the second UWT Rain Garden, funded by the Green Partnership Fund
- 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
- Co-creator of Chancellor's Advisory Committee on Sustainability (2009-10)
- Conference on Sustainability in Pierce County Higher Education (Chair of Organizing Committee 2008 and Member of Committee 2009-2012)
- UWT Brownfields Cleanup Grant Proposal (\$673,000) – contributor (2004)

#### Student Involvement

- Husky Sustainability Fund Committee member (2022-2024)
- Faculty Advisor, UWT Giving Garden (2008-2023)
- UWT Pantry, volunteer food deliveries during COVID pandemic (2020-2021)
- UWT Day of Caring, Site Supervisor for Giving Garden (2019)
- Court 17/Giving Garden healthy cooking demonstration and dinner (2017 and 2018)
- Faculty Advisor, UWT RSO Project Earth (multiple years)

#### Educational Initiatives

- Faculty and Staff Advisory Council for the Office of Community Partnerships (2019-present)
  - Reviewed proposals for Community Engagement Fellows
- UWT Undergraduate Research Community of Practice, co-Chair (2018)
- Research, Teaching and Public Engagement Roundtable, Invited Panelist (2016)
- Invited to participate in the SCEWestNet meeting at Seattle University to discuss incorporating undergraduate research in chemistry courses across the region
- IAS representative to campus Assessment Committee (2011-2012)
- 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)
- 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)
- UW Graduate Faculty (2002-present)
- UWT Distance Education Task Force (2000-2002)
- Urban Policy Center – discussion group member (2003)
- “Teams in Teaching and Learning” (sponsored by UWT Teaching and Learning Roundtable) – panel member (2003)
- Coordinator of UWT collaboration with the Sea Education Association (2000-2002)
- Co-coordinator of USGS/UWT co-location initiative (1999-2003)

#### **COMMUNITY**

Public Events Sponsored/Organized

- *Grit City Think and Drink* monthly public talk series coordinator (2017-present)
- *Regional Climate Resilience and Mitigation* talk series organizer (2021)
- *Ocean Voices Speaker Series* public event coordinator at UWT, with Point Defiance Zoo and Aquarium (2019)
- *Shore Stories* public event coordinator at UWT, with Surfrider Foundation (2018)
- *Plastic Ocean* public event coordinator at UWT, with Point Defiance Zoo and Aquarium (2017)
- *Peaking for Pikas* public event coordinator at Tacoma Mountaineers, with Point Defiance Zoo and Aquarium (2017)
- *Our Toxic Orcas* public event coordinator at UWT, with Washington Environmental Council and Defenders of Wildlife (2017)
- *Science Café* event with TESC 333 students presenting environmental chemistry concepts to students at First Creek Middle School (2015-16)
- Planned and coordinated the 2nd Annual Puyallup River Film Festival at UWT (funded by The Russell Family Foundation 2014)
- Planned and coordinated the 1st Annual Puyallup River Film Festival at UWT (funded by The Russell Family Foundation 2013)
- 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)
- Presented to visiting Russian delegation interested in environmental science at UWT (2011)
- “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)
- Sponsored talks by Arlene Blum, Green Science Policy Institute (2009)
- Hosted Tacoma Green Drinks (2009)
- South Sound Sustainability Exposition (Chair of Organizing Committee 2008 and Member of Committee 2009-2012)
- Sponsored talk by Christopher Swain, activist who swam the length of the Columbia River (2007)
- Water Monitoring Expo – educational collaboration between Project Earth and USGS (2002)
- UWT Science Building Grand Opening – planning group (2002)
- Lloyd Kaufman guest lecture (UWT Arts and Lectures fund) – organizer (2001)
- Wilma Subra guest lecture (UWT Arts and Lectures fund) – organizer (2000)

#### Volunteer Activities

- Participated in Tacoma Roots Environmental Justice Community Forum (2018)
- Multicultural Child and Family Health Center outreach event, participant (2017 and 2018)
- Chair of climbing programs for the Tacoma branch of The Mountaineers (2013-2016)
- “Freedom of the Hills” Chapter Author, The Mountaineers (2009)
- The Mountaineers, Tacoma branch – member and course instructor (2000-present)

#### K-12 Student Education

- Pierce County Sustainability Youth Summit Advisory Group and Steering Committee (2019-2022)
- PI on project to create K-12/NGO/Higher Education Collaborative Research Projects in the Puyallup River Watershed – workshop (2015-2020)
- Mount St. Helens Institute Summer Ecology Camp work with high school students at Spirit Lake (2018, 2019)
- Research data collection on SEARCH project with Surprise Lake MS and Rogers HS classes (2018)
- Bellarmine High School student research collaboration (2016-present)
- Math, Science, Leadership Expert Panel Member (2016)
- Foss High School, student research project mentor (2016)
- Work with The Mountaineers and Lincoln High School to create outdoor education program tied to field-based research in environmental science (2014-2016)
- Work with SAMI high school students on measuring metal toxicity in freshwater sediments using blood worms (2014-2015)
- 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)
- Participated as table leader for the 2011 Youth Environmental Summit at First Creek Middle School (2011)
- Coordinating and Advancing Marine Science Education in Puget Sound (funded by the Russell Family Foundation) – Steering Committee Member (2003-2004)

#### Professional Outreach to Community

- Pierce County Surface Water Management Advisory Board (appointed by County Council 2025-present)
- City of Tacoma Climate Adaptation Steering Committee (2020-2021)
- Presentation to Lake Killarney Improvement Association on initial findings of research on arsenic mobility and bioaccumulation in their lake as part of NIEHS-funded study (2016)
- Meeting with municipal, county, state and federal agency stakeholders to discuss initial findings of research on arsenic mobility and bioaccumulation in lakes in South King County as part of NIEHS-funded study (2016)
- Tacoma Green Infrastructure Challenge, steering committee member for 1st annual event (2014-2015)
- Presented research findings to the Lake Killarney Improvement Association (2014)
- “Wake Up Wapato” Community Outreach and Education Events at Wapato Lake, Tacoma (organized now by MetroParks, participant in 2012)
- Greater Tacoma Community Foundation – grant proposal review panel (2008-2012)
- “Wake Up Wapato” Community Outreach and Education Events at Wapato Lake, Tacoma (organizer and facilitator 2008-10)
- Chambers 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)
- 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)
- Tacoma Community College Scholarships for Upward Mobility – Advisory Board member (2007)
- Riviera Community Club (Anderson Island, WA) – free technical consultation (2002)

#### **PROFESSIONAL**

##### Professional Development Activities

- LGBTQIA+ 101 Workshop with Oasis Youth Center (2025)
- UW Holistic Mentorship and Creating a Positive Research Climate Webinar (2024)
- UWT DEI Professional Development: Building Beloved Communities Through Mindful Communication (2023)
- UWT Indigenous Pedagogy Institute (2021-2022)
- UWT iTech Fellows (2021)
- Hollaback Implicit Bias Training (2020)
- Experiences of Black STEM in the Ivory: A Call to Disruptive Action (2020)
- Hollaback De-escalation Training (2020)
- Hollaback Bystander Intervention Training (2020)

##### Review Activities

- Reviewer for *Journal of Geochemical Exploration; Science of the Total Environment; Water, Air, Soil Pollution; Water Research; Environmental Earth Sciences; 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-present)
- UW Royalty Research Fund – reviewer (2004, 2009, and 2021)
- Reviewer for Mary Gates Undergraduate Research Awards (2019)
- Anonymous external reviewer for 2 tenure cases and 1 promotion case for institutions across the country (2017 and 2018)
- Grant review for Murdock Charitable Trust
- EPA STAR Fellowship – Invited review panel member for Environmental Chemistry and Materials Science area, Washington, DC (2006)
- Reviewer for W.H. Freeman environmental science textbook (2002)

##### Conference Planning

- Planning Committee for the Mount St. Helens Research Pulse, July 18-22, 2025, Mount St. Helens National Volcanic Monument, WA.
- Co-Chair of a session for the Joint Aquatic Sciences Meeting, May 14-20, 2022, Grand Rapids, MI, with Avery Shinneman (UW Bothell) and Rachel Fricke (UW Seattle): "Access and Human Connection to Public Waters: Research and Outreach"

- Co-Chair of a session (3 time blocks) for the Association for the Sciences of Limnology and Oceanography Aquatic Sciences Meeting, June 22-27, 2021, VIRTUAL, with Meredith Holgerson (Cornell University) and Angela Strecker (Western Washington University): "Shallow Lakes: Ecology, Biogeochemistry, and Human Health"
- Program committee for Superfund Basic Research Conference, Seattle, WA (2019)
- Organizing committee for WALPA Annual Conference, Chelan, WA (2019)
- Co-chair of organizing committee for OLA/WALPA Joint Lakes Conference, Portland, OR (2018)
- Workshop Instructor on Limnology, WALPA Annual Conference, Chelan, WA (2014)
- Session Chair, Toxics in the Nearshore, Salish Sea Ecosystem Conference (2014)
- Chair of the organizing committee for the WALPA Annual Conference (2012)
- WALPA/NALMS 2011 Conference Planning Committee (2010-2011)
- WALPA 2010 Conference Host at UWT (2010)
- Sigma Xi Annual Meeting and Student Research Conference, Seattle, WA – student poster judge and networking lunch discussion leader (2005)
- WALPA 2003 Annual Meeting – Poster Session Organizer (2003)
- WALPA 2002 Annual Meeting – Oral Session Moderator (2002)
- American Society for Environmental History – field trip coordinator (2000)

#### Consulting and Technical Collaboration

- Spirit Lake Toutle Cowlitz River Collaborative (2021-2022)
- Mount St. Helens Scientific Advisory Panel on proposed options for Spirit Lake outflow (2019-2020)
- Working with Spanaway Lake homeowners on monitoring plan and remediation options for harmful algae blooms (2019-2020)
- Consult with City of SeaTac regarding Angle Lake research (2018)
- MusselWatch 2017-18 Study –volunteer coordinator for Commencement Bay sites (2017-2018)
- PI on collaborative grant submitted with UWS, UWB, WSU, WSU-Vancouver, CWU, and WWU for pilot state-wide volunteer lake monitoring program – not funded (2017)
- Consult with City of Tacoma and City of Federal Way environmental staff on Twin Lakes nutrient problem (2017)
- Consult on DeCoursey Pond algae problem with City of Puyallup and WSU-Puyallup (2017)
- Asked to consult on lake issues by Senior Policy Advisor to the Mayor of City of Federal Way (2017-18)
- MusselWatch 2015-16 Study –volunteer coordinator for Port of Tacoma study site (2015-2016)
- Invited to serve on expert review panel for WA Dept. of Natural Resources for first proposed freshwater aquatic reserve at Lake Kapowsin (2015)
- Working with WALPA to create state-wide volunteer lake monitoring program (2013-present)
- MusselWatch Pilot Expansion Study – organization committee and volunteer coordinator for Commencement Bay study sites (2012-2013)

#### Organization Leadership

- Outreach Committee, Association for the Sciences of Limnology and Oceanography (ASLO, 2021-2023)
- Association for the Sciences of Limnology and Oceanography (ASLO, Board nominee; 2021)
- Washington Lake Protection Association (WALPA, President 2012-13 and 2016-17; Past-President 2013-14 and 2017-19; President-Elect 2011-12; Board Member 2001-03, 2010-present)
- WALPA Waterline newsletter; in charge of quarterly newsletter and Communication Committee lead (2014-2019)
- Puyallup Watershed Initiative, Steering Committee for the Environmental Education Community of Interest to coordinate environmental education in the watershed (2013-2018)
- Sustainable Tacoma Commission, City of Tacoma (appointed by City Council 2009-2012)
- Puget Sound Center for Urban Bay Research – Scientific and Technical Advisory Board (2004-2005)
- Thea Foss Waterway Source Control Group (2002-2005)
- Tacoma Environmental Commission (2000-2003)