

Leora Nanus, Ph.D.

Assistant Professor, Department of Geography & Environment
College of Science and Engineering, San Francisco State University
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EDUCATION

Doctor of Philosophy (Ph.D.), Geography, 2008

Department of Geography, University of Colorado Boulder, Colorado.

Master of Science (M.S.), Geology, 2000

Department of Geology, Western Washington University, Washington.

Bachelor of Science (B.S.), Earth Sciences, 1995

Department of Earth Sciences, University of California Santa Cruz, California.
1991-1993: Colgate University, New York.

ACADEMIC APPOINTMENTS and PROFESSIONAL EXPERIENCE

- 2014 to present **Assistant Professor**, Geography & Environment, San Francisco State University, California.
- 2017 **Academic Visiting Researcher**, Eawag, Swiss Federal Institute of Aquatic Science and Technology, ETH Domain, SIAM, Dübendorf, Switzerland (January – June).
- 2010 to present **Associated Faculty**, Environmental Studies, San Francisco State University, California.
- 2009 to 2014 **Adjunct Assistant Professor and Research Scientist**, Earth & Climate Sciences, San Francisco State University, California.
- 2013 to 2014 **Assistant Researcher**, Principal Investigator, Institute of Marine Sciences, University of California Santa Cruz, California.
- 2011 to 2012 **Assistant Project Scientist**, Institute of Marine Sciences, University of California Santa Cruz, and NOAA Fisheries Service, Southwest Fisheries Science Center, California.
- 2010 **Lecturer**, Earth & Climate Sciences, San Francisco State University, California.
- 1999 to 2009 **Hydrologist**, U.S. Geological Survey, Colorado Water Science Center, Colorado.
- 2005 **Instructor**, Department of Geography, University of Colorado Boulder, Colorado.
- 2004 to 2006 **Graduate Research Assistant**, Institute of Arctic and Alpine Research, University of Colorado Boulder, Boulder, Colorado, Ph.D. advisor: Dr. Mark Williams.
- 1997 to 1998 **Graduate Research Assistant**, Geology, Western Washington University, M.S. advisor: Dr. Scott Babcock.

PEER-REVIEWED PUBLICATIONS

Peer-Reviewed Journal Articles

(*SFSU student author)

1. **Nanus, L.**, Campbell, D.H., Lehmann, C.M.B., Mast, M.A., In Review. Spatial and Temporal Variation in Sources of Atmospheric Nitrogen Deposition in the Rocky Mountains using Nitrogen Isotopes, *Atmospheric Environment*.
2. **Nanus, L.**, McMurray, J.A., Clow, D.W., Saros, J.E., Blett, T., Gurdak, J.J., 2017. Spatial Variation of Atmospheric Nitrogen Deposition and Critical Loads for Aquatic Ecosystems in the Greater Yellowstone Area, *Environmental Pollution* 223, 644-656, doi:10.1016/j.envpol.2017.01.077.
3. Gurdak, J.J., *Geyer, G.E., **Nanus, L.**, Taniguchi, M., *Corona, C.R., 2016. Scale Dependence of Controls on Groundwater Vulnerability in the Water-Energy-Food Nexus, California Coastal Basin Aquifer System, *Journal of Hydrology: Regional Studies*, doi:10.1016/j.erjh.2016.01.002.
4. Clow, D.W., Roop, H.A., **Nanus, L.**, Fenn, M.E, Sexstone, G.A., 2015. Spatial Patterns of Atmospheric Deposition of Nitrogen and Sulfur using Ion-exchange Resin Collectors in Rocky Mountain National Park, USA, *Atmospheric Environment* 101, 149-157.
5. *Newcomer, M.E., Gurdak, J.J., Sklar, L.S., **Nanus, L.**, 2014. Urban Recharge beneath Low Impact Development and Effects of Climate Variability and Change, *Water Resources Research* doi:10.1002/2013WR014282.
6. **Nanus, L.**, Clow, D.W., Saros, J.E., Stephens, V.C., Campbell, D.H., 2012. Mapping Critical Loads of Nitrogen Deposition for Aquatic Ecosystems in the Rocky Mountains, USA, *Environmental Pollution* 166, 125-135.
7. Clow, D.W., **Nanus, L.**, Verdin, K.L., Schmidt, J., 2012. Evaluation of SNODAS snow depth and snow water equivalent estimates for the Colorado Rocky Mountains, *Hydrological Processes* 26, 17, 2583-2591.
8. Clow, D.W., **Nanus, L.**, Huggett, B., 2010. Use of Regression-Based Models to Map Sensitivity of Aquatic Resources to Atmospheric Deposition in Yosemite National Park, *Water Resources Research* 46, doi:10.1029/2009WR008316.
9. **Nanus, L.**, Williams, M.W., Campbell, D.H., Tonnessen, K.A., Blett, T., Clow, D.W., 2009. Assessment of Lake Sensitivity to Acidic Deposition in National Parks of the Rocky Mountains, *Ecological Applications* 19, 4, 961-973.
10. **Nanus, L.**, Williams, M.W., Campbell, D.H., Elliott, E.M., Kendall, C., 2008. Evaluating Regional Patterns in Nitrate Sources to Watersheds in National Parks of the Rocky Mountains using Nitrate Isotopes, *Environmental Science and Technology* 42: 6487-6493.
11. Ingersoll, G.P., Mast, M.A., Campbell, D.H., Clow, D.W., **Nanus, L.**, Turk, J.T., 2008. Trends in snowpack chemistry and comparison to National Atmospheric Deposition Program results for the Rocky Mountains US, 1993- 2004, *Atmospheric Environment* 42, 6098-6113.

12. **Nanus, L.**, Campbell, D.H., Ingersoll, G.P., Clow, D.W., Mast, A.M., 2003. Atmospheric Deposition Maps for the Rocky Mountains, *Atmospheric Environment* 37, 4881-4892.
13. Mitchell, R.J., Babcock, S., Gelinas, S., **Nanus, L.**, Stasney, D., 2003. Nitrate Distributions and Source Identification in the Abbotsford-Sumas Aquifer, Northwestern Washington, *Journal of Environmental Quality* 32, 3, 789-800.
14. Clow, D.W., Striegl, R.G., **Nanus, L.**, Mast, M.A., Campbell, D.H., Krabbenhoft, D.P., 2002. Chemistry of Selected High-Elevation Lakes in Seven National Parks in the Western United States, *Water, Air, and Soil Pollution, Focus 2*: 139-164.

Peer-Reviewed Reports

15. Simonich, S., **Nanus, L.**, 2012. Sierra Nevada-Southern Cascades Region Air Contaminants Research and Monitoring Strategy, *National Park Service Technical Report*.
16. Ingersoll, G.P., Mast, M.A., Campbell, D.H., Clow, D.W., **Nanus, L.**, and Turk, J.T., 2009. Rocky Mountain snowpack physical and chemical data for selected sites, 1993–2008. *U.S. Geological Survey Data Series 369*.
17. Ingersoll, G.P., Mast, M.A., **Nanus, L.**, Handran, H.M., Manthorne, D.J., and Hulstrand, D.M., 2007. Rocky Mountain Snowpack Chemistry at Selected Sites, 2004. *U.S. Geological Survey, Open-File Report 2007-1045*.
18. **Nanus, L.**, Campbell, D.H., Williams, M.W., 2005. Sensitivity of Alpine and Subalpine Lakes to Acidification from Atmospheric Deposition in Grand Teton National Park and Yellowstone National Park, Wyoming. *U.S. Geological Survey, Scientific Investigations Report 2005-5023*.
19. Ingersoll, G.P., Mast, M.A., **Nanus, L.**, Manthorne, D.J., Handran, H.M., Hulstrand, D.M., Winterringer, J.A., 2005. Rocky Mountain Snowpack Chemistry at Selected Sites, 2003. *U.S. Geological Survey, Open-File Report 2005-1332*.
20. Ingersoll, G.P., Mast, M.A., **Nanus, L.**, Manthorne, D.J., Clow, D.W., Handran, H.M., Winterringer, J.A., Campbell, D.H., 2004. Rocky Mountain Snowpack Chemistry Synoptic at Selected Sites 2002. *U.S. Geological Survey, Open-File Report 2004-1027*.
21. Ingersoll, G.P., Mast, M.A., Clow, D.W., **Nanus, L.**, Campbell, C., Handran, H.M., 2003. Rocky Mountain Snowpack Chemistry Synoptic at Selected Sites for 2001. *U.S. Geological Survey, Open-File Report, 2003-48*.

Other Publications

Ingersoll, G.P., Campbell, D.H., Mast, M.A., Clow, D.W., **Nanus, L.**, Frakes, B., 2009. Snowpack Chemistry Monitoring Protocol for the Rocky Mountain Network; Narrative and Standard Operating Procedures. *U.S. Geological Survey, Administrative Report*.

Nanus, L., 2008. Regional Assessment of the Sources and Effects of Acidic Deposition on Lake Chemistry in Alpine and Subalpine Watersheds of National Parks in the Rocky Mountains, United States. *Ph.D. Dissertation., University of Colorado, Boulder, CO*.

Nanus, L., and Clow, D.W., 2004. Sensitivity of Lakes in Wilderness Areas in Oregon and Washington to Atmospheric Deposition, *U.S. Department of Agriculture Forest Service, Region 6, Administrative Report*.

Nanus, L., 2000. Spatial and Temporal Variability of Nitrate Contamination in the Abbotsford-Sumas Aquifer. Whatcom County, Washington. *M.S. Thesis, Western Washington University, Washington*.

Mitchell, R.J., Babcock, S., Stasney, D., **Nanus, L.**, Boesser, S., Matthews, R., and Vandersypen, J., 2000. *Abbotsford-Sumas Aquifer Monitoring Project, Final Report*.

FUNDED RESEARCH GRANTS and CONTRACTS

1. *Water-Energy-Food Nexus in Coastal California* – Evaluating Freshwater Vulnerability to Anthropogenic Stressors under Climate Change, Nanus, L. (PI), 2014-2015, California State University, Water Resources and Policy Initiatives, Faculty Research Incentive Award.
2. *Vulnerability of the Water-Energy-Food Nexus in Coastal California*, Gurdak, J. (PI), **Nanus, L.** (Co-I), 2013-2018, Research Institute for Humanity and Nature, Kyoto, Japan.
3. *Atmospheric Deposition in the Greater Yellowstone Ecosystem*, **Nanus, L.** (PI), 2013-2015, U.S. Forest Service, Bridger-Teton National Forest.
4. *Non-Point Contaminants in Alaskan National Park Ecosystems*, **Nanus, L.** (PI), Simonich, S. (Co-I), 2011-2014, National Park Service.
5. *Toxic Air Contaminants Research and Monitoring Strategy for Sierra Nevada Southern Cascades*, Simonich, S. (PI) and **Nanus, L.** (Co-I), 2010-2011, National Park Service.
6. *Preparing the San Francisco State University Community to Understand Climate Change Effects on Groundwater Resources in San Francisco*, Gurdak, J. (PI) and **Nanus, L.** (Co-I), 2010-2011, SFSU Office of Research and Sponsored Programs, FOA 2010-01 Facilitating Research at SFSU.
7. *Critical Loads of Atmospheric Nitrogen in the Rocky Mountains, USA*, **Nanus, L.** (PI), 2012, U.S. Geological Survey.
8. *Mapping Critical Loads of Atmospheric Nitrogen Deposition in the Rocky Mountains, USA*, Clow, D. (PI), Campbell, D.(PI), Saros, J.(Co-I), **Nanus, L.** (Co-I), Sickman, J. (Co-I), Fenn, M. (Co-I), Baron, J., Williams, M.(Co-I), 2007-2010, Multiple Agency: U.S. Environmental Protection Agency, National Park Service, U.S.D.A. Forest Service, U.S. Geological Survey.
9. *Determination of Source Areas and Source Types of Nitrogen Deposition in Colorado, Wyoming, Montana, and Utah using Nitrogen Isotopes*, **Nanus, L.** (PI), Campbell, D. (Co-I), Ingersoll, G., Harlin, K., 2007-2009, U.S. Environmental Protection Agency Funding Program: EPA-R8-2007-01 Regional Geographic Initiatives, Air Quality.
10. *Evaluation of Spatial and Temporal Variability in Source Types of Nitrogen Deposition in the Rocky Mountains using Nitrogen Isotopes*, **Nanus, L.** (PI), Campbell, D. (Co-I), Ingersoll, G., 2007-2009 U.S. Geological Survey, National Atmospheric Deposition and Hydrologic Benchmark Programs.

11. *Evaluation of Sampling Strategies for Capturing the Spatial Variability in Atmospheric Deposition in the Rocky Mountains*, **Nanus, L.** (PI), Ingersoll, G.(Co-I), Clow, D., Campbell, D., 2006-2007, National Park Service, Rocky Mountain Inventory and Monitoring Network.
12. *Snow-Sampling Protocol and Network Evaluation: Monitoring Atmospheric Deposition to Annual Snowpacks in the Rocky Mountain Region, USA*, Ingersoll, G. (PI), **Nanus, L.** (Co-I), Clow, D., Campbell, D., 2005-2007 National Park Service, Rocky Mountain Inventory and Monitoring Network.
13. *Determination of Sources of Atmospherically Deposited Nitrogen in Rocky Mountain National Park Using Multiple Techniques*, Clow, D. (PI), **Nanus, L.** (Co-I), 2006, National Park Service, Rocky Mountain National Park.
14. *Evaluating Nitrogen Sources in Alpine Lakes of the Rocky Mountains using Nitrate Isotopes*, **Nanus, L.** (PI), Campbell, D.H. (Co-I), Kendall, C., Williams, M., 2005-2006, U.S. Geological Survey, National Atmospheric Deposition Program and Hydrologic Benchmark Program.
15. *Developing Screening Procedures and Sampling Protocols for Assessment of Deposition-Sensitive Surface Waters in the Rocky Mountains*, **Nanus, L.** (PI), Williams, M.(Co-I), Campbell, D., Clow, D., 2003-2008, National Park Service, Air Resources Division.
16. *Lake Sensitivity to Atmospheric Deposition in Grand Teton and Yellowstone National Parks*, **Nanus, L.** (PI), Campbell, D. (Co-I), Williams, M., 2003-2004, National Park Service, Greater Yellowstone Inventory and Monitoring.
17. *Atmospheric Deposition of Pollutants in Yellowstone and Grand Teton National Parks and Bighorn Canyon National Recreation Area*, **Nanus, L.**, (PI) and Campbell, D. (Co-I), 2003-2004, National Park Service, Greater Yellowstone Inventory and Monitoring.
18. *Sensitivity of Lakes in Oregon and Washington Wilderness Areas to Deposition*, **Nanus, L.** (PI) and Clow, D. (Co-I), 2001-2003, U.S.D.A. Forest Service.
19. *Atmospheric Deposition Maps for the Rocky Mountains*, **Nanus, L.** (PI), Campbell, D. (Co-I), Ingersoll, G., Clow, D., Mast, M., 1999-2002, U.S. Geological Survey, National Atmospheric Deposition Program.

OTHER GRANTS and CONTRACTS

(Collaborator) US Forest Service (2010-2012)

Distribution of Ozone, Ozone Precursors and Gaseous Components of Atmospheric Nitrogen Deposition in the Lake Tahoe Basin

(Collaborator) Research Institute for Humanity and Nature, Kyoto, Japan (2013-2018)

Demarcation of Environmental Governance for Human Environmental Security in Asia-Pacific Region-Nexus of Thermal Energy, Water, and Coastal Fisheries

(Collaborator) U.S. Geological Survey, Water Resources Discipline (1999-2009)

Water, Energy, Biogeochemical Budgets in Alpine/Subalpine Watersheds

(Collaborator) U.S. Geological Survey, National Park Service, U.S. Forest Service (1999-2009)

Rocky Mountain Snowpack Chemistry Synoptic: High-Elevation Sites

(Collaborator) U.S. Forest Service (1999-2009)

Long Term Lakes Monitoring in U.S. Forest Service Wilderness Areas, Colorado

TEACHING**Courses Taught**

San Francisco State University

GEOG 751, Environmental Management Graduate Seminar (2017, 2016, 2015, 2014)

GEOG 644, Water Quality (2016, 2015)

GEOG 342/ERTH 442, Surface Water Hydrology (2016, 2010)

GEOG 642/ERTH 642, Watershed Assessment and Restoration (2017, 2015)

GEOG 101, Our Physical Environment (2014)

University of Colorado Boulder

GEOG 1011, Environmental Systems 2-Landscapes and Water (2005)

U.S. Geological Survey (USGS), Water Resources Discipline

Statistical Modeling for Hydrologists, Co-taught

HONORS and AWARDS

- SFSU Presidential Award for Professional Development (Spr. 2017) 2015
- Cal State Univ., Water Resources and Policy Initiatives, Faculty Research Incentive Award 2014
- National Park Service, Greater Yellowstone Area Honorarium 2011
- U.S. Geological Survey Superior Performance Award 2007
- National Park Service, Air Resources Division, Research Assistantship Grant 2004, 2005
- U.S. Geological Survey STAR Award 1999, 2002, 2003
- Washington State Department of Ecology, Research Assistantship Grant 1997, 1998
- Western Washington University, Geology Department, Graduate Research Funds Award 1998
- Western Washington University, Graduate School, Graduate Research Grant 1998
- Sigma-XI Grants-in-Aid of Research 1998
- Western Washington University, Elias Austin Bond Graduate Fellowship in Geology 1997

CONFERENCE ABSTRACTS and PROCEEDING PAPERS (< 4 years)

(*SFSU student author)

Nanus, L., Lehmann, C.M.B., Mast, M.A., submitted. Evaluating Variation in Sources of Atmospheric Nitrogen Deposition in the Rocky Mountains using $\delta^{15}\text{N-NO}_3^-$ and $\delta^{15}\text{N-NH}_4^+$. *Proceedings of the National Atmospheric Deposition Program Technical Meeting, San Diego, CA.*

Nanus, L., Clow, D.W., Saros, J., McMurray, J.A., Blett, T.A., Sickman, J.O., 2017. Multiscale Framework for Assessing Critical Loads of Atmospheric Nitrogen Deposition for Aquatic Ecosystems in Wilderness Areas of the Western United States. *European Geosciences Union General Assembly, EGU2017-10537, Vienna, Austria.*

Nanus, L., Clow, D.W., Sickman, J.O., 2016. Critical Loads of Atmospheric Nitrogen Deposition for Aquatic Ecosystems in Yosemite and Sequoia & Kings Canyon National Parks. *Eos Trans. AGU, Fall Meet. Suppl. B13F-0711.*

*Stein, S., **Nanus, L.**, Wilkinson, N., 2016. Water Quality in Estuarine Wetland Restoration: An Examination of Dissolved Oxygen and Nutrients in the South Bay Salt Pond Restoration Project, *Eos Trans. AGU, Fall Meet. Suppl. H43I-1587.*

Gurdak, J.J., *Geyer, G.E., **Nanus, L.**, Taniguchi, M., *Corona, C.R., 2016. Scale Dependence of Controls on Groundwater Vulnerability to Nonpoint-source Nitrate Contamination, California Coastal Basin Aquifer System, *Toward Sustainable Groundwater in Agriculture, CA.*

*Stein, S., **Nanus, L.**, Wilkinson, N., 2016. An examination of Water Quality in the South Bay Salt Pond Restoration Project, *Proceedings of the American Association of Geographers Annual Meeting, San Francisco, CA.*

- *Doudna, E., **Nanus, L.**, Gurdak, J., Wilkinson, N., 2016. Using the Water-Energy-Food Nexus of fracking and irrigation wells to better inform sustainable groundwater management decisions in California, *Proceedings of the American Association of Geographers Annual Meeting*, San Francisco, CA
- Nanus, L.**, McMurray, J., Clow, D., Saros, J., Blett, T., 2015. Spatial Variation of Atmospheric Nitrogen Deposition and Estimated Critical Loads for Aquatic Ecosystems in the Greater Yellowstone Area. *Eos Trans. AGU, Fall Meet. Suppl.*, B13G-0719.
- Nanus, L.**, McMurray, J., Clow, D., Saros, J., Blett, T., 2015. Mapping Critical Loads of Atmospheric Nitrogen Deposition for Aquatic Ecosystems in the Greater Yellowstone Area, USA. *9th International Acid Rain Conference, Rochester, New York.*
- Nanus, L.**, Clow, D.W., Saros, J., Blett, T., McMurray, J., 2015. Mapping Critical Loads of Nitrogen Deposition for Aquatic Ecosystems in National Parks of the Western United States, *Science for Parks, Parks for Science: The Next Century, University of California Berkeley, National Geographic, and the National Park Service.*
- Nanus, L.**, *Geyer, G., Gurdak, J.J., Orenco, P.M., Endo, A., Taniguchi, M., 2014. Freshwater Vulnerability to Nitrate Contamination as an Indicator of Sustainability and Resilience within the Water-Energy-Food Nexus of the California Coastal Basins, *Eos Trans. AGU, Fall Meet. Suppl.*, H23I-0995.
- Clow, D.W., Roop, H.A., **Nanus, L.**, Fenn, M.E, Sexstone, G.A., 2014. Mapping Atmospheric Deposition of Nitrogen and Sulfur in Rocky Mountain National Park, USA using Ion-exchange Resin Collectors, *Proceedings of the National Atmospheric Deposition Program Technical Meeting, Indianapolis, IN.*
- Nanus, L.**, Simonich, S.L., Rocchio, J., Flanagan, C., 2013. Evaluating the spatial distribution of toxic air contaminants in different ecosystem indicators in the Sierra Nevada-Southern Cascades, *Eos Trans. AGU, Fall Meet. Suppl.*, B13F-0585.
- Gurdak, J.J., *Newcomer, M.E., Sklar, L.S., **Nanus, L.**, 2013. Managed aquifer recharge with low impact development under a changing climate, *Eos Trans. AGU, Fall Meet. Suppl.*, H11F-1210, INVITED.

INVITED RESEARCH PRESENTATIONS

- 2017 Eawag, Swiss Federal Institute of Aquatic Science and Technology, SIAM (February 7)
- 2016 Sonoma State University, Department of Geology (November 10)
- 2014 San Francisco State University, Department of Geography & Environment (February 13)
- 2013 Research Institute for Humanity and Nature, Kyoto, Japan (July 16)
- 2013 Portland State University, Department of Environmental Science and Management (February 18)
- 2012 University of San Francisco, Department of Environmental Science (April 19)
- 2011 National Park Service, Jackson, Wyoming (April 5)
- 2009 San Francisco State University, Department of Earth & Climate Sciences (November 3)
- 2006 Sonoma State University, Department of Geography and Global Studies (February 8)
- 2003 Greater Yellowstone Clean Air Partnership, West Yellowstone, Montana (November 5)

MENTORING

Master's Committee Chair (Primary Advisor)

- **Kelly Krotcova**, *Tradeoffs of Water Security & Adequate Ecological Protection During Drought, Coastal California*, Geography & Environment, Concentration in Resource Management and Environmental Planning (RMEP), SFSU, *in progress*.
- **Deseret Weeks**, *Mercury Fate and Transport in the Cache Creek Watershed, California*, Geography & Environment, RMEP, SFSU, *in progress*. Awards: Sally Casanova Pre-Doctoral Scholar, CSU California Pre-Doctoral Program, 2017-2018; COAST Graduate Student Research Award, 2017.
- **Samuel Stein, M.A.**, *An Examination of Water Quality in the South Bay Salt Pond Restoration Project, California*, Geography & Environment, RMEP, SFSU, 12/2016. Awards: Graduate Student

Distinguished Achievement 2017; AAG Student Award, Water Resources Specialty Group, 2016; SFSU COSE Robert W. Maxwell Memorial Scholarship, 2015.

- **Ellen Doudna, M.A.**, *Trends in the Water-Energy-Food Nexus of California's Central Valley*, Geography & Environment, RMEP, SFSU, 12/2016.

Master's Committee

- **Jeffrey Blumenthal**, Geography & Environment, SFSU (*in progress*).
- **Zoe Statman-Weil**, Geography & Environment, SFSU (*in progress*).
- **Jasleen Pannu**, Geography & Environment, SFSU (*in progress*).
- **Charlotte Hummer, M.A.**, Geography & Environment, RMEP, SFSU, 05/2017.
- **Jessica Sloan, M.A.**, *Evaluating Visitation at Don Edwards NWR: Encouraging Environmental Education and Urban Conservation*, Geography & Environment, RMEP, SFSU, 12/2016.
- **Gabby Geyer, M.S.**, *Vulnerability of Recently Recharged Groundwater in the California Coastal Basins to Nitrate Contamination*, Earth & Climate Sciences, SFSU, 08/2014.

PROFESSIONAL and SERVICE ACTIVITIES

Co-coordinator, SFSU Academic Internship Program with National Park Service and Parks Conservancy.

Academic Advisor, B.S. Environmental Science, Geography & Environment, SFSU.

Academic Advisor, B.A. Geography, Physical Environment Focus Advisor, Resource Management Focus Advisor, Geography & Environment, SFSU.

Peer Reviewer for Professional Journals:

Environmental Pollution, Journal of the American Water Resources Association, Journal of Hydrology, Regional Studies, Environmental Science and Technology, Water Resources Research, Biogeochemistry, Limnology and Oceanography.

Peer Reviewer for Federal Agencies:

National Science Foundation, U.S. Geological Survey Scientific Investigations Reports, National Park Service Technical Reports, U.S. Forest Service Technical Reports.

Professional Society Memberships:

American Geophysical Union, European Geosciences Union, American Association of Geographers, Association of Pacific Coast Geographers

PROFESSIONAL DEVELOPMENT and TRAINING

- | | |
|---|------------|
| • Environmental Systems Analysis, Eawag | 2017 |
| • UCAR Annual Members Meeting Participation, Early Career | 2016 |
| • Early Career Geoscience Faculty Workshop (SERC) | 2015 |
| • Wilderness First Aid Certification | 2000, 2006 |
| • Water Safety Training and Certification | 2001 |
| • Isotope Hydrology | 2000 |
| • ArcInfo Geographic Information Systems | 1999, 2000 |
| • Avalanche Safety Certification Level I and Level II | 1999 |