

JOHN A. HARRISON
CURRICULUM VITAE
AUGUST 2009

Room 230B, Engineering and Life Sciences
School of Earth and Environmental Sciences
Washington State University, Vancouver
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Vancouver, Washington 98686

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EDUCATION

Ph.D., Geological & Environmental Sciences, Stanford University 2003

Dissertation: *Nitrogen dynamics and greenhouse gas production in Yaqui Valley surface drainage waters*

Bachelor of Science (Honors), Biological Sciences, Brown University 1995

POSITIONS HELD

- 2006 – Present **Assistant Professor**, School of Earth and Environmental Sciences, Washington State University, Vancouver
- 2005 – 2006 **CALFED Science Fellow**, Department of Land, Air, and Water Resources, University of California, Davis; Advisor: Dr. Randy Dahlgren
- 2003 – 2005 **Postdoctoral Associate**, Institute of Marine and Coastal Sciences, Rutgers University; Advisor: Dr. Sybil Seitzinger
- 1997 – 2002 **Doctoral Student Researcher**, Stanford University; Advisor: Dr. Pamela Matson
- 1995 – 1996 **Samuel T. Arnold Science and Policy Fellow**, Brown University, Costa Rica, Taiwan, and England
- 1995 **Research Assistant**, Scripps Institute of Oceanography, R/V Polar Duke and Palmer Station, Antarctica
- 1994 **Research Associate**, Environmental Defense, New York, NY

GRANTS

FUNDED

- 2009 – 2010 U.S. Bureau of Reclamation: *Modeling nitrogen loads and sources in central valley watersheds: taking existing monitoring data to the next stage*, \$42,000; PI: Harrison
- 2007 – 2010 NASA-ROSES: *Further tests on a modeling framework to detect and analyze changes in land-to-coastal fluxes of freshwater and constituents*, \$1,200,000; PI: Vörösmarty (Harrison Co-PI, WSU portion \$180,000)
- 2008 – 2009 USGS 104b Program: *Reservoir sediments: biofilter or environmental liability?* \$25,000; PI: Harrison
- 2008 – 2009 WSU Vancouver Faculty Mini-grant: *Summer spill events and nutrients in the Columbia River*, \$4,000; PI: Harrison (co-written with D. Sobota)
- 2007 – 2008 USGS 104b Program: *Lacamas lake and other northwest reservoirs as bioreactors: how do dams affect downstream nutrient transport?* \$24,000; PI: Harrison
- 2007 – 2008 WSU Vancouver Faculty Mini-grant: *Soil phosphorus availability and lupines during primary succession*, \$4,000; PI: Harrison (co-written with M. Murashkina)
- 2005 – 2008 California Bay Delta Authority: *Modeling nutrient and organic carbon loads and sources in central valley watersheds: taking existing monitoring data to the next stage*, \$229,500; PI: Harrison

PENDING

- 2010 – 2012 NSF ULTRA: *Collaborative Research: How do feedbacks between governance and biophysical systems affect resilience of urban socio-ecological systems?* \$184,416; PI: Yeakley (Harrison Co-PI)
- 2010 - 2012 NASA-ROSES: *Integrating land-to-ocean flux dynamics: a focus on global change in the coastal oceans*, \$2,757,007; PI: Vörösmarty (Harrison, one of several Co-PIs)

HONORS AND AWARDS

U.S. Environmental Protection Agency Expert	2009
California Bay Delta Authority Fellowship	2006
NSF DIALOG Participant	2005
President IMCS Postdoctoral Association	2003 – 2005
NSF Pre-doctoral Fellowship	1997 – 2000
NASA Earth System Science Graduate Fellowship	1999 – 2002
NSF Dissertation Enhancement Award	2001 – 2002
Two McGee Fellowships, Stanford University	1998 & 2000
Samuel T. Arnold Fellowship, Brown University	1995 – 1996
Brown University Writing and Rhetoric Fellow	1993 & 1994
Two NSF Research Experience for Undergraduates Grants	1993 & 1994
Woods Hole Research Consortium Fellowship Award	1992

PEER-REVIEWED PUBLICATIONS

(*Postdoc or student directly supervised by Harrison)

28. Mayorga, E., S.P. Seitzinger, **J.A. Harrison**, E. Dumont, and A.H.W. Beusen (Submitted) Riverine sources, retention and export of nutrients and carbon: An enhanced framework and integrated scenarios application of the Global Nutrient Export from WaterSheds (NEWS) model, *Environmental Modelling & Software*.
27. Seitzinger, S.P., E. Mayorga, C. Kroeze, A.F. Bouwman, A.H.W. Beusen, G. Billen, G. Van Drecht, E. Dumont, B.M. Fekete, J. Garnier, and **J.A. Harrison** (In Press) Global river nutrient export: a scenario analysis of past and future trends. *Global Biogeochemical Cycles*.
26. **Harrison, J.A.**, A.F. Bouwman, E. Mayorga, and S.P. Seitzinger (In Press) Magnitudes and sources of dissolved inorganic phosphorus inputs to surface fresh waters and the coastal zone: a new global model. *Global Biogeochemical Cycles*.
25. **Harrison, J.A.** (2009) *Nitrogen Pollution and Greenhouse Gases in Yaqui Valley Streams: Understanding the Downstream Legacy of the Green Revolution*. 114 pp. Lambert Academic Publishing, Köln, Germany, ISBN 978-3-8383-1486-0.
24. **Harrison, J.A.**, J.H. Cohen, E. Hinchey, A. Moerke, and P. von Dassow (2009) Developing and implementing an effective public outreach program. *Eos*, 90(38), 333-334.
23. Van Drecht, G., A.F. Bouwman, **J.A. Harrison**, and J. Knoop (2009) Global nitrogen and phosphate in urban waste water for the period 1970-2050. *Global Biogeochemical Cycles*, 23, GB0A03, doi:10.1029/2009GB003458.
22. Ahrens, T., **J.A. Harrison**, J.M. Beman, P.A. Matson, P. Jewett, and I. Ortiz-Monasterio (In Press) Nitrogen in the Yaqui Valley: sources, transfers, and consequences, Chapter 9 in: P.A. Matson, R. Naylor, and W.P. Falcon (Eds.) *A transition to sustainability: harmonizing agriculture, development and environment in the Yaqui Valley*, NRC Press, Washington D.C..

21. *Sobota, D. J., **J.A. Harrison**, and R. A. Dahlgren (2009) Input and export of nitrogen for watersheds in the Central Valley, California: annual and seasonal patterns. *Biogeochemistry*, DOI 10.1007/s10533-009-9307-y.
20. **Harrison, J.A.**, R. Maranger, R.B. Alexander, A. Giblin, P.-A. Jacinthe, E. Mayorga, S.P. Seitzinger, *D.J. Sobota, and W. Wollheim (2009) Controls and significance of nitrogen retention in lakes and reservoirs. *Biogeochemistry*, 10.1007/s10533-008-9272-x.
19. Liu, K.-K., S. Seitzinger, E. Mayorga, **J. Harrison**, and V. Ittekkot (2008) Fluxes of nutrients and selected organic pollutants carried by rivers, Chapter 8 in: E. Urban & S. Greenwood (Eds.) *PACKMEDS - Dynamics and vulnerability of semi-enclosed marine systems: the integrated effects of changes in sediment and nutrient input from land*. Scientific Committee on Progress in the Environment (SCOPE), New York.
18. Ahrens T., M.Beman, **J. A.Harrison**, P.Jewett, P.Matson (2008) Nitrogen transformations and transfers from land to the sea in the Yaqui Valley agricultural region. *Water Resources Research*, 44, W00A05, doi:10.1029/2007WR006661.
17. Glibert, P., et al. (**J.A. Harrison** 30th of 55 authors) (2008) Fertilizing the tropical or subtropical oceans with urea will not reduce greenhouse gases and should not be conducted to gain carbon offsets. *Marine Pollution Bulletin*, 56(6), 1049–1056.
16. Wollheim, W.M., C.J. Vorosmarty, A.F. Bouwman, P. Green, **J.A. Harrison**, M. Meybeck, B.J. Peterson, S.P. Seitzinger, and J.P. Syvitski (2008) A spatially distributed framework for aquatic modeling of the Earth system (FrAMES). *Global Biogeochemical Cycles*, 22, GB2026, doi:10.1029/2007GB002963.
15. Seitzinger, S.P. and **J.A. Harrison** (2008) Sources and delivery of nitrogen to coastal systems, Chapter 8 in *Nitrogen in the Marine Environment, 2nd edition*. D. Capone, D.A. Bronk, M.R. Mullholland, E. Carpenter Eds., Academic Press, New York.
14. Chow, A., R.A. Dahlgren, and **J. Harrison** (2007) Watershed sources of disinfection byproduct precursors in the Sacramento and San Joaquin Rivers, California. *Environmental Science & Technology*, 41(22), 8645-7652.
13. Seitzinger, S.P., **J.A. Harrison**, J.K. Bohlke, A.F. Bouwman, R. Lowrance, B.J. Peterson, C. Tobias, and G. Van Drecht (2006) Denitrification across landscapes and waterscapes: a synthesis, *Ecological Applications*, 16(6), 2064–2090.
12. Glibert, P.M., **J.A. Harrison**, C. Heil, and S.P. Seitzinger (2006) Escalating worldwide use of urea: a global change contributing to coastal eutrophication, *Biogeochemistry*, doi:10.1007/S10533-3070-0, 1-23.
11. **Harrison, J.A.**, N.F. Caraco, and S.P. Seitzinger (2005) Global distribution and sources of dissolved organic matter export by rivers: results from a spatially explicit, global model (NEWS-DOM), *Global Biogeochemical Cycles*, 19 (4), GB4S04, doi:10.1029/2005GB002480, 1-16.
10. **Harrison, J.A.**, S.P. Seitzinger, A.F. Bouwman, N.F. Caraco, A.H.W. Beusen and C. Vörösmarty (2005) Dissolved inorganic phosphorus export to the coastal zone: results from a spatially explicit, global model (NEWS-DIP), *Global Biogeochemical Cycles*, 19, GB4S03, doi:10.1029/2004GB002357, 1-15.

9. **Harrison, J.A.**, P.A. Matson and S. Fendorf (2005) Effects of a diel oxygen cycle on nitrogen transformations and greenhouse gas emission in a eutrophied, subtropical stream, *Aquatic Sciences*, doi:10.1007.s00027-005-0776-3, 1-8.
8. Seitzinger, S.P., **J.A. Harrison**, E. Dumont, A.H.W. Beusen, and A.F. Bouwman (2005) Sources and delivery of carbon, nitrogen, and phosphorus to the coastal zone: an overview of Global NEWS models, *Global Biogeochemical Cycles*, GB4S05, doi:10.1029/2005GB002453, 1-11.
7. Dumont, E., **J.A. Harrison**, C. Kroeze, E.J. Bakker and S.P. Seitzinger (2005) Global distribution and sources of DIN export to the coastal zone: results from a spatially explicit, global model (NEWS-DIN), *Global Biogeochemical Cycles*, 19, GB4S02, doi:10.1029/2005GB002488, 1-14.
6. Beusen, A.H.W., A.L.M. Dekkers, A.F. Bouwman, W. Ludwig and **J.A. Harrison** (2005) Estimation of global river transport of sediments and associated particulate carbon, nitrogen, and phosphorus, *Global Biogeochemical Cycles*, 19, GB4S05, doi:10.1029/2005GB002453, 1-19.
5. Deegan, L.A., H.E. Golden, **J. Harrison**, K. Kracko (2005) Swimming performance and metabolism of 0+ year *Thymallus arcticus*, *Journal of Fish Biology*, 67(4), 910-918.
4. **Harrison, J.A.** and P.A. Matson (2003) Patterns and controls of nitrous oxide (N₂O) emissions from drainage waters of the Yaqui Valley, Sonora, Mexico. *Global Biogeochemical Cycles*, 17, (3), 1080, doi:10.1029/2002GB001991, 1-13.
3. **Harrison, J.A.** (2003) *Nitrogen Dynamics and Greenhouse Gas Production in Yaqui Valley Surface Drainage Waters*, Doctoral Thesis, Stanford University.
2. Deegan, L.A., A. Wright, S.G. Avayzian, J.T. Finn, H. Golden, R.R. Merson and **J.A. Harrison** (2002) Nitrogen loading alters seagrass ecosystem structure and support of higher trophic levels. *Aquatic Conservation: Marine and Freshwater Ecosystems*, 12:193-212.
1. **Harrison, J.A.** and P.A. Matson (2000) The atmosphere as a global commons, Chapter 10 in *Protecting the Commons*, Burger, J., R. Norgaard, E. Ostrom, D. Policansky, and B.D. Goldstein (eds.), Island Press, Washington D.C..

OTHER PUBLICATIONS

7. Bouwman, A.F., and **J.A. Harrison** (2009) The challenge of coastal nutrient over-enrichment, *GPA Outreach: Oceans and Coasts Newsletter*, January-March 2009, UN Environment Programme Press.
6. **Harrison, J.A.**, Notes from the Southern Ocean (2007) *Open Spaces Magazine*.
5. **Harrison, J.A.**, R. Lee., E. Dumont, and S. P. Seitzinger (2005) Workshop user manual for IOC Global NEWS-DIN watershed nutrient export model.
4. **Harrison, J.A.** (2003) The carbon cycle (what goes around comes around), (www.visionlearning.com) - Online Textbook Module.

3. **Harrison, J.A.** (2003) The nitrogen cycle (of microbes and men), (www.visionlearning.com) - Online Textbook Module.
2. **Harrison, J.A.** (2001) Agriculture and pollution in the developing world: understanding the link between fertilizer use, greenhouse gases, and coastal change in Sonora, Mexico, (<http://www.stanford.edu/group/i-rite/statements/2001/harrison.html>), Stanford Research Communication Web Page.
1. L. Haimson et al. (1995) *A Moment of Truth*, **J.A. Harrison** (contributor) Environmental Defense Fund Press, New York.

MANUSCRIPTS IN ADVANCED STAGES OF DEVELOPMENT

(*Postdoc or student directly supervised by Harrison)

Dahlgren, R.A., **J.A. Harrison**, S.S. Henson, A.T. O'Geen, E. E. Van Nieuwenhuysse, P.W. Lehman, E. Gallo, and E.C. Volkmar, Diel phytoplankton dynamics in a eutrophic river resulting from growth and transport, *Environmental Science and Technology*.

S.S. Henson, S.S., R.A. Dahlgren, E. Van Nieuwenhuysse, A.T. O'Geen, K.W. Tate, and **J.A. Harrison**, High resolution fluorescence monitoring reveals factors controlling algal loads on the hypereutrophic San Joaquin River, California. For *Limnology and Oceanography*.

Harrison, J.A. and D. Conley, Controls and significance of dissolved silica retention in lakes and reservoirs. For *Global Change Biology*.

*Sobota, D.S., **J.A. Harrison**, and R.A. Dahlgren, Phosphorus in central California river basins: net anthropogenic inputs and relationships with riverine export. For *Water Resources Research*.

TEACHING AND ADVISING

WSU COURSES

Watershed Biogeochemistry (ES/RP 592) , Alternate Years	2006 – Present
Global Biogeochemistry (ES/RP 492 [M]/592) , Alternate Years	2006 – Present
Second Semester General Chemistry (CHEM 106 [P]) , Annually	2006 – Present

OTHER TEACHING-RELATED ACTIVITIES

Organizer/Leader Nutrient Loading and Large Marine Ecosystems Workshop, World Bank/GEF, Paris, France, 1/2006, with S. Seitzinger, designed, developed and taught a short course on the application of global river nutrient export models; participants included 8 leading scientists from 7 distinct developing world regions

Supervisor for Technicians, Stanford University, Rutgers University, and WSU-Vancouver
2000 -Present, Trained and supervised 5 technicians for periods up to 3 years.

Founder/Organizer of Stanford Biogeochemistry Seminar, Stanford University, 1999 -
2000 Conceived, attained funding for, organized, and led the first Stanford
Biogeochemistry Seminar, which subsequently lasted for at least 5 years (20+
participants/year, 12 speakers/year, budget \$5000/yr)

Writing and Rhetoric Fellow, Brown University, Providence, RI, 1993 - 1994, Taught
writing and speaking skills to Brown University undergraduates for 3 semesters.

MENTORING AND ADVISING

Current Postdoctoral Associate

Daniel Sobota

Current Graduate Students (*Harrison primary advisor)

*Bridget Deemer (M.S.)

*Kara Goodwin (M.S.)

*Rebecca Martin (Ph.D.)

Louise Wynn

Ray Yurkewycz

Kassi Dallavis

Past Graduate Students (*Harrison primary advisor)

Nathan Reynolds

Undergraduate Research Assistants (¹WSU, ²Current, ³Received Award for Research)

Rachel Sipler

Weihan Chang

Undergraduate Research Assistants Continued

Cali Benfit¹

Dawn Freeman^{1,2}

Elliott Whitling^{1,2,3}

Kathleen Denlinger¹

Abraham Robles¹

Zack Budiselic^{1,3}

Maria Glavin^{1,2}

Drew Houston^{1,2}

Undergraduate Academic and Career Advising

2009 10 Students

2008 25 Students

2007 14 Students

2006 8 Students

Total 57 Students

SELECTED PUBLISHED ABSTRACTS

(First-authored only)

- Harrison, J.A.**, A.F. Bouwman, E. Mayorga, and S.P. Seitzinger, *Global and continental-scale dissolved inorganic phosphorus export by rivers: results from a new regional-global model*, Coastal and Estuarine Research Federation, Portland, OR: 11/09.
- Harrison, J.A.**, A.F. Bouwman, E. Mayorga, and S.P. Seitzinger, *Continental-scale dissolved inorganic phosphorus export by rivers: results from a regional-global modeling approach*, Ecological Society of America, Albuquerque, NM: 8/09.
- Harrison, J.A.** *Continental-scale dissolved inorganic phosphorus export by rivers: results from a regional-global modeling approach*, AGU, San Francisco, CA: 12/08.
- Harrison, J.A.**, R.M. Maranger, R. Alexander, A. Giblin, P.-A. Jacinthe, E. Mayorga, S. Seitzinger, D. Sobota, and W. Wollheim, *The regional and global significance of nitrogen removal in lakes and reservoirs*, Ecological Society of America, Milwaukee, WI: 8/08.
- Harrison, J.A.** *Rivers, nutrients, and greenhouse gases: insights from a case study and a global model*, SIL, Montreal, QC: 8/2007.
- Harrison, J.A.**, *Urban areas as sources of pollution*, Ecological Society of America, Merida, Mexico: 1/2006.
- Harrison, J.A.**, N.F. Caraco, and S.P. Seitzinger, *Global patterns and sources of dissolved organic matter export to the coastal zone: results from a spatially explicit, global model*, Estuarine Research Federation, Norfolk, VA: 10/2005.
- Harrison, J.A.**, N.F. Caraco, and S.P. Seitzinger, *Global patterns and sources of dissolved organic matter export to the coastal zone: results from a spatially explicit, global model*, Ecological Society of America, Montreal, QC: 8/2005.
- Harrison, J.A.**, S.P. Seitzinger, N. Caraco, A.F. Bouwman, A. Beusen, and C.J. Vörösmarty, *Dissolved inorganic phosphorus export to the coastal zone: results from NEWS-DIP*, Ecological Society of America, Portland, OR: 8/2004.
- Harrison, J.A.**, S.P. Seitzinger, C. Kroeze, N.F. Caraco, and E. Dumont, *Dissolved nitrogen and phosphorus export to the coastal zone: early results from a multi-element, multi-form approach at the regional scale*, American Geophysical Union-Ocean Sciences, Portland, OR: 1/2004.
- Harrison, J.A.**, S.P. Seitzinger, C. Kroeze, N.F. Caraco, and E. Dumont, *Dissolved nitrogen and phosphorus export to the coastal zone: early results from a multi-element, multi-form approach at the regional scale*, Estuarine Research Federation, Seattle, WA: 9/2003.
- Harrison, J.A.**, S.P. Seitzinger, C. Kroeze, N.F. Caraco, and E. Dumont, *Dissolved nitrogen and phosphorus export to the coastal zone: early results from a multi-element, multi-form approach*, Gordon Conference, New London, NH: 7/2003.

- Harrison, J.A.**, *Nitrogen dynamics and greenhouse gas production In Yaqui Valley surface drainage waters*, Thesis Defense, Stanford University, Stanford, CA: December 2002.
- Harrison, J.A.**, and P.A. Matson, *Rapid-onset anoxia, greenhouse gas production, and nitrogen transfer in a Mexican stream*, National meeting of the Ecological Society of America, Tucson, AZ: 8/2002.
- Harrison, J.A.**, and P.A. Matson, *Nitrogen dynamics and nitrous oxide (N₂O) in coastal streams of an intensively farmed, subtropical valley*, Estuarine Research Federation, St. Petersburg, FL: 10/2001.
- Harrison, J.A.**, and P.A. Matson, *Nitrogen dynamics and nitrous oxide (N₂O) in coastal streams of an intensively farmed, subtropical valley*, National meeting of the Estuarine Research Federation, St. Petersburg, FL: 11/2001.
- Harrison, J.A.**, and P.A. Matson, *Nitrous oxide (N₂O) emissions from drainage waters in an intensively farmed, subtropical valley*, National meeting of the Ecological Society of America, Madison, WI: 8/2001.
- Harrison, J.A.**, and P.A. Matson. *Nitrous oxide (N₂O) emissions from drainage waters in an intensively farmed, subtropical valley*, Open Science Conference, Amsterdam, ND: 7/2001.
- Harrison, J.A.**, and P.A. Matson. *Nitrous Oxide (N₂O) emissions from drainage waters in an intensively farmed, subtropical valley*, National meeting of The American Geophysical Union, San Francisco, CA: 12/2000.
- Harrison, J.A.**, and P.A. Matson. *Greenhouse gas emissions from drainage waters in an intensively farmed, subtropical valley*, Snowbird, UT: 8/2000.
- Harrison, J.A.**, P.A. Matson. *Greenhouse gas emissions from drainage waters in an intensively farmed, subtropical valley*, National meeting of the Ecological Society of America: 8/2000.
- Harrison, J.A.** Honors thesis presentation I, *Young-of-the-Year Arctic Grayling (Thymallus arcticus) Metabolism, Swimming Ability, and Temperature*, Ecosystems Center, The Marine Biological Laboratory, Woods Hole, MA: 12/1995.
- Harrison, J.A.** Honors thesis presentation II, *Ibid.* Brown University, Providence, RI: 12/1995.
- Harrison, J. A.** *Food web dynamics in Waquoit Bay's Hamblin Pond, a ¹⁵N tracer study*, Ecosystems Center, The Marine Biological Laboratory Woods Hole, Summer Research Symposium, Woods Hole, MA: 8/1992.

INVITED SYMPOSIA

- Harrison, J.A.**, *Chancellor's Seminar: Coastal Nutrient Over-enrichment: A Pressing 21st Century Issue*, Vancouver, WA: 3/09. (video-taped and re-broadcast on Vancouver Public Access Television multiple times)
- Harrison, J.A.** and D. J. Sobota, *Insights into Stream and River Biogeochemistry from a Few Large-Scale Analyses*, Oregon State University, Corvallis, OR: 11/08.
- Harrison, J.A.**, *Nutrient Delivery to the Coastal Zone: Insights from a Case Study and a Global Model*, Western Washington University, Bellingham, WA: 11/08.
- Harrison, J.A.**, *Regional and Global Approaches to Understanding N-related Ecosystem Services*, Environmental Protection Agency, Portland, OR: 8/08.
- Harrison, J.A.**, *Nutrient transport through watersheds: how much do people and lakes matter?* Washington State University, Civil and Environmental Engineering Department, Pullman, WA: 11/2007.
- Harrison, J.A.**, *Rivers, nutrients, and greenhouse gases: insights from a case study and a global model*, USGS Cascade Volcanoes Observatory, Vancouver, WA: 1/2007.
- Harrison, J.A.**, *Rivers, nutrients, and greenhouse gases: insights from a case study and a global model*, Zoology Department Seminar, Oregon State University: 11/2006.
- Harrison, J.A.**, *Rivers, nutrients, and greenhouse gases: insights from a case study and a global model*, Ecosystems Center, Marine Biological Laboratory, Woods Hole, MA: 5/2006.
- Harrison, J.A.**, *Rivers, nutrients, and greenhouse gases: insights from a case study and a global model*, San Diego State University, San Diego, CA: 3/2006.
- Harrison, J.A.**, *Human impacts on watershed fluxes of bioactive chemicals: insights from modeling and field-based approaches*, Washington State University, Vancouver and Pullman (2 lectures), WA: 3/2006.
- Harrison, J.A.**, *Rivers, Nutrients, and Greenhouse Gases: Insights from a Case Study and a Global Model*, University of Texas, Austin, TX: 3/2006.
- Harrison, J.A.**, *Human impacts on watershed biogeochemistry: insights from modeling and field-based approaches*, Bodega Bay Marine Lab, Bodega Bay, CA: 2/2006.
- Harrison, J.A.**, *Urban areas as sources of pollution*, Ecological Society of America, Merida, Mexico: 1/2006.
- Harrison, J.A.**, *Human impacts on watershed biogeochemistry: insights from modeling and field-based approaches*, University of California-Davis, Davis, CA: 4/2005.
- Harrison, J.A.**, *Dissolved Inorganic Phosphorus Export to the Coastal Zone: Results from a Spatially-explicit, Global Model*, University of California-Davis, Davis, CA: 4/2005.

- Harrison, J.A.**, *Rivers, Nutrients, and Greenhouse Gases: Insights from a Case Study and a Global Model*, Purdue University, West Lafayette, IN: 3/2005.
- Harrison, J.A.**, *Human impacts on watershed biogeochemistry: insights from modeling and field-based approaches*, Indiana University, Bloomington, IN: 1/2005.
- Harrison, J.A.**, *Global-NEWS models and global dissolved nitrogen and phosphorus export to the coastal zone: early results from a multi-element, multi-form approach*, Institute of Ecosystem Studies, Millbrook, NY: 1/2005.
- Harrison, J.A.**, S.P. Seitzinger, N.F. Caraco, A.F. Bouwman, A. Beussen, and C.J. Vörösmarty. *Global NEWS models and global dissolved nitrogen and phosphorus export to the coastal zone: early results from a multi-element, multi-form approach*. UNESCO, Paris, France: 5/2004.
- Harrison, J.A.**, *Global NEWS models and global dissolved nitrogen and phosphorus export to the coastal zone: early results from a multi-element, multi-form approach*. RIVM, Bilthoven, Netherlands: 12/2003.
- Harrison, J.A.**, *Spatially explicit models for river export of dissolved organic nitrogen and soluble reactive phosphorus: successes and challenges*. UNESCO, Paris, France: 3/2003.
- Harrison, J.A.**, *Nitrogen dynamics and nitrous oxide (N₂O) production in drainage waters and estuaries of an intensively farmed, subtropical valley*, Department of Environmental Science, Policy, and Management, UC Berkeley, CA: 1/2002.
- Harrison, J. A.**, *Nitrogen dynamics in Yaqui Valley drainage waters*, Annual meeting of the Yaqui Valley research group, San Carlos, Mexico: October 2001.
- Harrison, J.A.**, *Nitrogen dynamics and nitrous oxide (N₂O) production in drainage waters and estuaries of an intensively farmed, subtropical valley*, Water Resources Group at USGS, Menlo Park, CA: 12/2001.
- Harrison, J.A.**, *Nitrogen dynamics and nitrous oxide (N₂O) in the drainage waters of the Yaqui Valley*, Annual meeting of the Yaqui Valley research group, Stanford University, CA: 10/2001.
- Harrison, J.A.** *Climate change: Is it real?* Portland chapter of the World Affairs Council: 11/2000.
- Harrison, J.A.** *The role of natural scientists in Taiwanese and Costa Rican environmental policy formulation: successes and challenges*: Presentation of Arnold Fellowship research results, Taiwan Forestry Research Institute; Taipei, Taiwan: 7/1996.
- Harrison, J.A.** *The role of tropical ecologists in Costa Rican environmental policy*, La Selva Tropical Research Station, Costa Rica: 3/1996.

ACADEMIC SERVICE

Project Co-Chair (with Lex Bouwman) and North American Chair: UNESCO-IOC-funded Global Nutrient Export from WaterSheds (Global NEWS) project

U.S. Environmental Protection Agency Expert: Consultant for U.S. EPA's Ecosystem Services Research Program, Nitrogen Focus

Member: Environmental Geophysicist Search Committee - WSU Vancouver, (2006-2007)

Member: Ecohydrologist Search Committee - WSU Pullman, (2007-2008)

Member: SEES Reorganization Research Subcommittee

Coordinator: WSU, Vancouver Science Programs Seminar, (Spring 2007)

Undergraduate Advisor: 57 WSU Vancouver undergraduates, (Fall 2006 - present)

President: Rutgers-IMCS Postdoctoral Association, 2003 - 2005, represented interests of postdoctoral scholars to faculty

REVIEWS WHILE AT WSU
(number of reviews if more than 1)

Proposals:

2009: *National Science Foundation*

2008: *Kearney Foundation, Icelandic Science Centre for Research*

2007: *Kearney Foundation*

Journals:

2009: *Limnology and Oceanography, Freshwater Biology*

2008: *Biogeochemistry(2), Journal of Environmental Quality, J. Hydrology, J. North American Benthological Society, Marine and Freshwater Research*

2007: *Biogeochemistry, Environmental Pollution, JGR Biogeosciences*

2006: *Ecological Applications, Global Biogeochemical Cycles, Journal of Environmental Quality, UNEP-Global Environmental Outlook 4, Water Research*

PROFESSIONAL MEMBERSHIPS

American Association for the Advancement of Science

American Geophysical Union

American Society of Limnology and Oceanography

Ecological Society of America

Coastal and Estuarine Research Federation

Sigma Xi

WORKSHOPS ATTENDED

National Meeting of U.S. E.P.A. Ecosystem Services Research Program, Athens, GA, 2009

Connecting the Dots: Understanding Linkages Between Hypoxia and Fisheries, Smithsonian Environmental Research Center, Annapolis, MD, 2009

Global Nutrient Export from Watersheds Workshops, UNESCO, Paris, France, 2003, 2004, 2005, 2007, 2008, and 2009

NSF Research Coordination Network in Modeling Denitrification, Institute of Ecosystem Studies, Millbrook, NY, 2007

Dissertations Initiative for the Advancement of Limnology and Oceanography (DIALOG VII), Dauphin Island, AL, 2005, Selective symposium for recent Ph.D. recipients in the aquatic sciences

The First Global and Regional Scenarios Workshop of GEO-4, Bangkok, Thailand, 2005, One of ten representatives from North America to United Nations Environment Programme-organized workshop to explore environmental consequences of four distinct regional and global development scenarios

Nitrate Stable Isotopes Workshop, USGS, Menlo Park, 2002

Integrating Research in a Teaching Environment Program (I-RITE), Stanford University, 2001, short course on communicating research to public

Stable Isotope Ecology Course, University of Utah, 1999, selective short course in the use of stable isotopes in environmental research

REFERENCES AVAILABLE UPON REQUEST