

R. CHRISTIAN JONES

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DEGREES

Rice University	B.A.	1973
Vanderbilt University	M.A.	1977
University of Wisconsin-Madison	Ph.D.	1980

PAST POSITIONS

Director, Mason Center for Conservation Studies (2009-2011)
Chair, Department of Environmental Science and Policy (2000-2008)
Professor, Department of Biology, George Mason University, Fairfax, Virginia (1997-2000)
Associate Professor, Department of Biology, George Mason University, Fairfax, Virginia, (1986-1997).
Director, Graduate Programs in Environmental Science-Public Policy, George Mason University, Fairfax, Virginia, (1992-1995).
Assistant Professor, Department of Biology, George Mason University, Fairfax, Virginia, (1980-1986)
Research Assistant, Institute for Environmental Studies, University of Wisconsin-Madison, (1977-1980)
Research Scientist, Battelle Northwest Laboratories, Richland, Washington, (1977)
Teaching Fellow, Vanderbilt University, Nashville, Tennessee, (1974-1976)
Aquatic Biologist, Texas Water Quality Board, Austin, Texas, (1973-1974)

AWARDS

David W. Rossell Quill Award for Leadership and Dedication. George Mason University. Fall 2010
Champion Award, Fairfax County Department of Public Works and Environmental Services. Partnering category: leadership and community outreach in support of DPWES projects. For Gunston Cove study. Awarded December 2013.
Environmental Excellence Award, Fairfax County. Awarded to PEREC. Recognizing Gunston Cove study and other activities in support of improving the environment of Fairfax County. To be awarded Sept 2014.
EPA award?

FIELDS OF RESEARCH SPECIALIZATION

Freshwater ecology
Bioassessment using benthic invertebrates
Ecology of phytoplankton and attached algae
Ecology of tidal embayments
Effects of nonpoint pollution on freshwater ecosystems

PROFESSIONAL ORGANIZATIONS

American Society of Limnology and Oceanography
Ecological Society of America
Societas Internationalis Limnologiae
North American Benthological Society
Estuarine Research Federation
Soil and Water Conservation Society
American Fisheries Society

COURSES TAUGHT:

EVPP 110/111: The Ecosphere: Environmental Science I, II
-developed and coordinated
BIOL 103-104: Contemporary Biology
BIOL 307: General Ecology
BIOL 341: Phycology
EVPP/BIOL 350: Freshwater Ecosystems
BIOL 377: Ecosystems Ecology
BIOL 546: Estuarine and Coastal Ecology
EVPP/BIOL 550: Waterscape Ecology (formerly Limnology)
EVPP 555: Lab in Waterscape Ecology
EVPP/BIOL 607: Fundamentals of Ecology
BIOL 643: Microbial Ecology
EVPP/BIOL 645: Freshwater Ecology
EVPP/BIOL 650: Environmental Analysis and Modeling
EVPP 677: Applied Ecology and Ecosystem Management
EVPP/BIOL 692: Seminar in Environmental Biology
EVPP/BIOL 741: Advanced Topics in Environmental Biology
EVPP/BIOL 991: Advanced Seminar in Environmental Biology
PAGE 227-228: Scientific Thought and Processes
Course Coordinator, PAGE 228, 1986-1989
NCLC 220: Energy and Environment
HNRS 228: Watershed Sustainability Science
EVPP 741: Exploratory and Multivariate Analysis
Eagle Hill Field Research Station: Introduction to Freshwater Ecology
CONS 401: Conservation Theory
EVPP 651: Multivariate Analysis for Ecology and Environmental Science
EVPP 301: Environmental Science: Biological Diversity and Ecosystems
EVPP 302: Environmental Science: Biomes and Human Dimensions

RESEARCH EXPERIENCE

- George Mason University (1980-present):
 Long-term study of water quality and aquatic ecology in Gunston Cove
 Ecological study of Hunting Creek
 Use of macroinvertebrates to assess stream ecosystem and water quality
 Effects of urban runoff on lake phytoplankton and stream invertebrates
 Effect of riparian buffers on stream invertebrates
 Land use-water resource relationships in Virginia
 Bioassays of toxicity of sewage effluent to *Daphnia*
 Ecological impact of *Hydrilla* invasion on the Potomac River
 Use of plant pigments as taxonomic markers in aquatic systems
 Total Maximum Daily Load (TMDL) Studies
- University of Wisconsin-Madison (1977-1980): Ph.D. dissertation research on primary production and community composition of epiphytic algae in Lake Wingra, Wisconsin
- Battelle Northwest Laboratories (1977): EPA study to assess Kepone contamination of the James River, Virginia
- University of Michigan Biological Station (1976): Independent research project on the colonization of artificial substrates by freshwater protozoans
- Vanderbilt University (1974-1976): M.A. thesis research on the dynamics of substrate colonization by attached algae in a freshwater lake
- Texas Water Quality Board (1973-1974): Limnological surveys of Texas lakes and streams subjected to various levels of pollution

PEER-REVIEWED JOURNAL ARTICLES

- Jones, R.C., J. Cairns, Jr., and W.H. Yongue, Jr. 1976. Vertical gradients in artificial substrate-associated protozoan community structure in a stratified freshwater lake. *Journal of the Elisha Mitchell Scientific Society* 92: 1-8.
- Jones, R.C. 1978. Algal biomass dynamics during colonization of artificial islands: experimental results and a model. *Hydrobiologia* 59: 165-180.
- Jones, R.C. 1981. Productivity of algal epiphytes in a Georgia salt marsh: effect of inundation frequency and implications for total marsh productivity. *Estuaries* 3: 315-317.
- Jones, R.C. and M.S. Adams. 1982. Seasonal variations in photosynthetic response of algae epiphytic on *Myriophyllum spicatum* L. *Aquatic Botany* 13: 317-330.
- Jones, R.C., M.S. Adams, and K. Walti. 1983. Phytoplankton as a factor in the decline of the submersed macrophyte *Myriophyllum spicatum* L. in Lake Wingra, Wisconsin, U.S.A. *Hydrobiologia* 107: 213-219.
- Jones, R.C. 1984. Application of a primary production model to epiphytic algae in a shallow, eutrophic lake. *Ecology* 65:1895-1903.
- Jones, R.C. 1984. Effects of urban stormwater runoff on reservoir phytoplankton. *Verhandlungen Internationale Vereinigung Limnologie* 22: 1486-1492.
- Jones, R.C. and C.C. Clark. 1987. Impact of watershed urbanization on stream insect communities. *Water Resources Bulletin* 23: 1047-1055.
- Edson, J.J. and R.C. Jones. 1988. Spatial, temporal, and storm-runoff related variations

- in phytoplankton community structure in a small urban reservoir. *Hydrobiologia* 169: 353-362.
- Jones, R.C. 1990. The effect of submersed aquatic vegetation on phytoplankton and water quality in the tidal freshwater Potomac River. *Journal of Freshwater Ecology* 5: 279-288.
- Jones, R.C. 1991. Spatial and temporal patterns in a cyanobacterial phytoplankton bloom in the tidal freshwater Potomac River, U.S.A. *Verhandlungen Internationale Vereinigung Limnologie* 24: 1698-1702.
- Fulton, R.S. and R.C. Jones. 1991. Growth and reproductive responses of *Daphnia* to cyanobacterial blooms on the Potomac River. *Internationale Review gesamten Hydrobiologie* 76: 5-19.
- Jones, R.C., C. Buchanan, and V. Andrieu. 1992. Spatial, seasonal, and interannual patterns in the phytoplankton communities of a tidal freshwater ecosystem. *Virginia Journal of Science* 43: 25-40.
- Connor, T.E. and R.C. Jones. 1993. Population dynamics of *Bosmina longirostris* in a tidal freshwater ecosystem. *Verhandlungen Internationale Vereinigung Limnologie* 25: 984-987.
- Thorp, A.G., R.C. Jones, and D.P. Kelso. 1997. A comparison of water-column macroinvertebrate communities in beds of differing submersed aquatic vegetation in the tidal freshwater Potomac River. *Estuaries* 20: 86-95.
- Jones, R.C. 1998. Seasonal and spatial patterns in phytoplankton photosynthetic parameters in a tidal freshwater river. *Hydrobiologia* 364: 199-208.
- Connor, T.E. and R.C. Jones. 1998. Survival and reproduction by *Bosmina longirostris* fed two species of green algae. *Verhandlungen Internationale Vereinigung Limnologie* 25: 984-987.
- Norton, S.B., S. Cormier, M. Smith, and R.C. Jones. 2000. Can biological assessments discriminate among types of stress? A case study from the Eastern Corn Belt Plains ecoregion. *Environmental Toxicology and Contamination* 19: 1113-1119.
- Coles, J.F. and R.C. Jones. 2000. The effects of temperature and light on the growth and photosynthetic response of four freshwater phytoplankton species. *Journal of Phycology* 36: 7-16.
- Connor, T.E. and R.C. Jones. 2000. Zooplankton dynamics in an artificially destratified reservoir, Lake Barcroft, Fairfax County, Virginia: a 2-year study. *Verhandlungen Internationale Vereinigung Limnologie* 27: 2950-2953.
- Jones, R.C. 2000. Long-term trends in summer phytoplankton chlorophyll a in the tidal freshwater Potomac River, USA: relationship to climatic and management factors. *Verhandlungen Internationale Vereinigung Limnologie* 27: 2959-2962.
- Norton, S.B., S. Cormier, M. Smith, R.C. Jones, and M. Schubauer-Berigan. 2002. Predicting Levels of Stress from Biological Assessment Data: Empirical Models from the Eastern Corn Belt Plains Ecoregion. *Environmental Contamination and Toxicology* 21: 1168-1175.
- Jones, R.C., D.P. Kelso, and E. Schaeffer. 2008. Spatial and seasonal patterns in water quality in an embayment-mainstem reach of the tidal freshwater Potomac River, USA: a multiyear study. *Environmental Monitoring and Assessment* 147:351-375. DOI 10.1007/s10661-007-0126-0. Available on line at Springer web site.

- Jones, R.C. 2008. Long term response of water quality to changes in nutrient loading at a mainstem site in the tidal freshwater Potomac River. *Verhandlungen Internationale Vereinigung Limnologie* 30(4): 633-637.
- Orzetti, L.L., R.C. Jones, and R.F. Murphy. 2010. Stream condition in Piedmont streams with restored riparian buffers in the Chesapeake Bay watershed. *Journal of the American Water Resources Association* 46: 473-485.
- Kraus, R.T. and R.C. Jones. 2012. Fish abundances in shoreline habitats and submerged aquatic vegetation in a tidal freshwater embayment of the Potomac River. *Environmental Monitoring and Assessment* 184: 3341-3357.
- Jones, R.C. and A.P. Graziano. 2013. Diel and seasonal patterns in water quality continuously monitored at a fixed site on the tidal freshwater Potomac River. *Inland Waters* 3: 421-436.
- DeMutsert, K., A. Sills, C.J.C. Schlick, and R.C. Jones. 2017. Successes of restoration and its effects on the fish community in a freshwater tidal embayment of the Potomac River, USA. *Water* 9(6): 421. doi: 10.3390/w9060421.
- Graziano, A.P. and R.C. Jones. 2017. Diel and seasonal patterns in continuously monitored water quality at fixed sites in two adjacent embayments of the tidal freshwater Potomac River. *Water* 9 (8): 624. Open access. <https://doi.org/10.3390/w9080624>. Published on line: August 21, 2017.

MONOGRAPHS

- Jones, R.C. 1977. Algal biomass dynamics during colonization of artificial islands in a freshwater lake. Master's thesis. Vanderbilt University. 167 pp. (Thesis Advisor: C. Rodell)
- Jones, R.C. 1980. Primary production, biomass, nutrient limitation, and community structure of algal communities epiphytic on *Myriophyllum spicatum* in Lake Wingra, Wisconsin. Ph.D. dissertation. University of Wisconsin-Madison. (Dissertation Advisor: M.S. Adams)
- Jones, R.C. and B.H. Holmes. 1985. *Effects of Land Use Practices on Water Resources in Virginia*. Bulletin 144. Virginia Water Resources Research Center. Blacksburg, VA.
- Long, G.R. and R.C. Jones. 2004. Development of Predictive Relationships between Stressors and Macrobenthic Communities for Use in Implementing TMDL's. Virginia Water Resources Research Center Special Report SR26-2004. 63 pp. Available at: http://www.vwrrc.vt.edu/publications/special_reports.htm
- R.C. Jones, C. Gray, and L. Birsa. 2018. "Lab Manual for EVPP 301: Environmental Science: Biological Diversity and Ecosystems. Spring 2018." 65 pp. Barnes and Noble GMU Bookstore.

EDITED VOLUMES

- Jones, R.C., G.W. Redfield, and D.P. Kelso (eds). 1982. *Urbanization, Stormwater Runoff, and the Aquatic Environment*. George Mason University. 140 pp.

BOOK CHAPTERS AND SYMPOSIUM PROCEEDINGS

- Jones, R.C., A. Gurevitch, and M.S. Adams. 1980. Significance of the epiphyte component of the littoral to biomass and phosphorus removal by harvesting. Pages 51-61 in J.E. Breck, R.T. Prentki, and O.L. Loucks (eds). *Aquatic Plants, Lake Management, and Ecosystem Consequences of Lake Harvesting*. Institute for Environmental Studies, University of Wisconsin-Madison.
- Redfield, G.W. and R.C. Jones. 1982. Effects of urbanization on lake ecosystems. Pages 42-60 in R.C. Jones, G.W. Redfield, and D.P. Kelso (eds). *Urbanization, Stormwater Runoff, and the Aquatic Environment*. George Mason University.
- Jones, R.C., and K.B. Mayer. 1983. Seasonal changes in the taxonomic composition of epiphytic algal communities in Lake Wingra, Wisconsin, U.S.A. Pages 11-16 in R.G. Wetzel (ed.) *Periphyton of Freshwater Ecosystems*. Dr. W. Junk Publishers. The Hague, Netherlands.
- Jones, R.C. 1988. Use of *in situ* nutrient addition and dilution bioassays to detect nutrient limitation in the tidal freshwater Potomac. Pages 241-252 in *Understanding the Estuary: Advances in Chesapeake Bay Research*. Chesapeake Research Consortium Publication 129. CBP/TRS 24/88.
- Jones, R.C. 1988. Submersed aquatic weedbeds as a habitat in the tidal freshwater Potomac. Pages 15-25 in *Submerged Aquatic Vegetation in the Potomac*. M.P. Sullivan and J.H. Hannahan (eds.). D.C. Water Resources Research Center Report No. 87.
- Kircher, S.R. and R.C. Jones. 1991. The temporal and spatial distribution of sediment phosphorus and iron in Gunston Cove, Virginia. In: *New Perspectives in the Chesapeake System: A Research and Management Partnership*. Proceedings of a Conference. Chesapeake Research Consortium. Publication No. 137.
- Jones, R.C., T. Grizzard, and R.E. Cooper. 1996. The response of stream macroinvertebrates and water quality to varying degrees of watershed suburbanization in northern Virginia. Pages 671-674 in *Watershed '96: Moving Ahead Together*. U.S. Environmental Protection Agency.
- Jones, R.C., A. Via-Norton, and D. Morgan. 1997. Bioassessment of BMP effectiveness in mitigating stormwater impacts on aquatic biota. Pages 402-417 in *Effects of Watershed Development and Management on Aquatic Ecosystems*. Larry Roesner (ed.) American Society of Civil Engineers. New York.
- Albert, R., L. Vacherlon, and R.C. Jones. 2005. Impacts of Urbanization on Nitrate Export in Two Northern Virginia Watersheds. Pages 224-228 in Proceedings of Conference on Emerging Issues Along Urban-Rural Interfaces: Linking Science and Society. Atlanta, Georgia.
- Jones, R.C., J. Wilder, and H. Jorgensen. 2008. GIS-based forested riparian buffer analysis of selected streams in the Chesapeake Bay watershed. Pages 199-203 in *Connecting Management to Aquatic Communities*. Proceedings of 2007 Virginia/West Virginia Water Research Symposium. A. Constantinescu (ed). Virginia Water Resources Research Center. Blacksburg, MD. Available on line: www.vwrrc.vt.edu/pdfs/proceedings/2007WaterResearchSymposium_proceedings.pdf
- Jones, R.C. and C. Buchanan. 2009. Analysis of continuous water quality monitoring data from the tidal freshwater Potomac River. Proceedings of 2009 Virginia Water Research Conference. Patrick Fay (ed) Virginia Water Resources Research

Center. Available on line:

www.vwrrc.vt.edu/pdfs/proceedings/2009WaterResearchSymposium_proceedings_web.pdf

WORKS IN PROGRESS:

- Jones, R.C. In preparation. Recovery of a tidal freshwater embayment from eutrophication: a long term study. To be submitted to *Estuaries and Coasts*.
- Bhattarai, S. and R.C. Jones. In review. Influence of best management practices on physicochemical properties and macroinvertebrates of urban streams. Submitted to *Journal of the American Water Resources Association*.

INVITED PRESENTATIONS (recent):

- "Stormwater impacts on streams, lakes, and ponds". Stormwater Technical Workshop. Annapolis, MD. November 8, 1993. Sponsored by U.S. EPA Region III.
- "Use of rapid bioassessment in assessing urban stormwater impacts." National Stormwater Coordinators Meeting. February 3, 1994. Sponsored by U.S. EPA.
- "An evaluation of multivariate statistical methods and multimetric approaches in assessing urbanization impacts on stream macrobenthos." Workshop on Statistics, Metrics, and Data Analysis. North American Benthological Society Annual Meeting. May 24, 1994.
- "Urban stormwater and the aquatic biota: are they compatible?". New Concepts in Urban Stormwater Management Technology Seminar. George Mason University. February 1999.
- "Gunston Cove Monitoring: Long-term Trends in Physical, Chemical, and Biological Parameters at River and Cove Stations, 1983-2000." Regional Monitoring Subcommittee. Washington Metropolitan Council of Governments. December 13, 2001.
- "Environmental Studies to Support NASA Facility Management and Chesapeake Bay Restoration." Given October 2002 to NASA Headquarters Staff and broadcast to NASA field staff by TV.
- "3-D GIS in Urban Environment". GIS Day at GMU. November 19, 2003.
- "Graduate Programs in Environmental Management at George Mason University". Invited presentation at Annual Meeting of the Multistate Working Group on Environmental Performance. Charleston, West Virginia. June 28-30, 2004.
- Water column nutrient, water quality, and phytoplankton responses to external and internal nutrient loading in the Gunston Cove area of the tidal freshwater Potomac River. R. Christian Jones and Donald P. Kelso. Special session SPS-36. Estuarine Research Federation biennial meeting. Norfolk, VA. Fall 2005.
- Twenty years of changes in the middle tidal freshwater Potomac River. Donald P. Kelso and R Chris Jones. Presented to Potomac River Conference sponsored by the Interstate Commission on the Potomac River Basin. September 2005.
- Thresholds in the Recovery of Eutrophic Coastal Ecosystems. Chesapeake Bay Program Scientific and Technical Advisory Committee. Belmont, MD. February 2007.

- Long term responses of water quality in the tidal freshwater Potomac River to changes in nutrient loading. Invited presentation to the Potomac Monitoring Forum. Washington Metropolitan Council of Governments. March 2008.
- The Chesapeake Bay: Overview and Selected Topics. Osher Lifelong Learning Institute. George Mason University. February 2009.
- Progress in restoring Gunston Cove, a tidal freshwater embayment of the Potomac River impacted by eutrophication, as revealed by long-term monitoring. Ecosystem Based Management: the Chesapeake and Other Systems. Session entitled "Lessons from History: How could long-term perspectives inform the Chesapeake Bay's response to restoration efforts?". Sponsored by Chesapeake Research Consortium. March 2009.
- Jones, R.C. 2010. Continuous monitoring of water quality in the tidal Potomac River: Uses in Education, Research, and Management". Virginia Water Monitoring Council Annual Meeting. Henrico, Virginia. May 7, 2010. Full presentation published at: <http://www.vwrrc.vt.edu/vwmc/2010Conference.htm>

CONTRIBUTED PRESENTATIONS (recent):

- Connor, T.E. and R.C. Jones. May 1993. Survival and reproduction by *Bosmina longirostris* fed two species of green algae. Virginia Academy of Science Annual Meeting and American Society of Limnology and Oceanography Annual Meeting.
- Via-Norton, A. and R.C. Jones. May 1993. Population dynamics of *Eurytemora affinis* in the tidal freshwater Potomac River. Virginia Academy of Science Annual Meeting.
- Jones, R.C. June 1993. Factors affecting summer phytoplankton biomass in the tidal freshwater Potomac River. American Society of Limnology and Oceanography Annual Meeting.
- Jones, R.C. and D.P. Kelso. April 1994. Effects of nonpoint source pollution on macroinvertebrate and fish communities in northern Virginia streams. Virginia Waters Conference.
- Jones, R.C., D.P. Kelso, D.R. Morgan, and P.S. Winesett. May 1994. Prince William watersheds project: Stream bioassessment. Society of Wetland Scientists Annual Meeting.
- Jones, R.C., and J. Chen. June 1994. Seasonal dynamics of phytoplankton in the tidal freshwater Potomac River. American Society of Limnology and Oceanography/ Phycological Society of America Joint Meeting.
- Jones, R.C., A. Via-Norton, and P.S. Winesett. June 1995. A comparison of benthic macroinvertebrate communities in streams draining northern Virginia watersheds of varying degrees of urban development. North American Benthological Society Annual Meeting.
- Jones, R.C., A. Via-Norton, and P.S. Winesett. June 1996. The response of benthic macroinvertebrate communities to watershed suburbanization and best management practices in northern Virginia. North American Benthological Society Annual Meeting.
- Sklarew, D.M. and R.C. Jones. February 1997. Factors affecting interannual water quality

- changes in the upper Potomac estuary. Atlantic Estuarine Research Society Meeting.
- Jones, R.C., A. Via-Norton, and D. Morgan. June 1997. The relationship between habitat factors and macroinvertebrate metrics in suburban and forested Piedmont watersheds. North American Benthological Society Annual Meeting.
- Sklarew, D.M. and R.C. Jones. October 1997. Inter-annual changes in water quality along the Potomac River estuary: implications for nutrient management. Estuarine Research Federation Biennial Meeting.
- Jones, R.C. and J. Chen. October 1997. Use of HPLC to monitor phytoplankton community dynamics in tidal freshwater: comparison with traditional inverted microscopy. Estuarine Research Federation Biennial Meeting.
- Jones, R.C. March 1998. Long-term trends in summer phytoplankton chlorophyll *a* in the tidal freshwater Potomac River: relationship to climatic and management factors. Atlantic Estuarine Research Society Meeting.
- Islam, S. and R.C. Jones. May 1998. Seasonal abundance of phytoplankton in Gunston Cove: 1995. Virginia Academy of Science Annual Meeting. (Oral presentation)
- Jones, R.C. August 1998. Long-term trends in summer phytoplankton chlorophyll *a* in the tidal freshwater Potomac River: relationship to climatic and management factors. Societas Internationalis Limnologiae Congress. (Oral presentation)
- Connor, T.E. and R.C. Jones. August 1998. Zooplankton communities in Lake Barcroft, Virginia. Societas Internationalis Limnologiae Congress. (Poster presentation)
- Astin, L.E. and R.C. Jones. May 1999. Effects of livestock exclusion on stream recovery in Clarke County, Virginia. North American Benthological Society Annual Meeting. (Poster presentation)
- Maher, A.C. and R.C. Jones. May 1999. Stream habitat and macroinvertebrate community response to watershed suburbanization in northern Virginia. North American Benthological Society Annual Meeting. (Poster presentation)
- Buchanan, C. and R.C. Jones. November 1999. Further analysis of predator-prey relationships in the Potomac Estuary monitoring data. Estuarine Research Federation Biennial Meeting. (Poster presentation).
- Jones, R.C. and J. Chen. October 2000. Use of HPLC to Monitor Phytoplankton Dynamics in Tidal Freshwater: Comparison with Traditional Inverted Microscopy. Atlantic Estuarine Research Society Spring Meeting. Norfolk, VA.
- Brittingham, K.D., J.R. Keough, and R.C. Jones. June 2001. Food web analysis of a tidal freshwater embayment of the Potomac River using stable isotope techniques. North American Benthological Society Annual Meeting. LaCrosse, WI.
- Arciszewski, J. and R.C. Jones. June 2001. Bioassessment of the Bull Run Watershed. Virginia Water Research Symposium 2001. Charlottesville, VA.
- Jones, R.C. and G.R. Long. November 2001. Use of existing databases to develop a predictive model of macroinvertebrate-stressor relationships for Virginia streams. Virginia Water Research Symposium 2001. Charlottesville, VA.
- Arciszewski, J. and R.C. Jones. November 2001. Bioassessment of the Bull Run Watershed. Virginia Water Research Symposium 2001. Charlottesville, VA.
- Jones, R.C. December 2001. Gunston Cove monitoring: long-term trends in physical,

- chemical, and biological parameters at river and cove stations: 1983-2000. Washington Metropolitan Council of Governments. Potomac Monitoring Subcommittee. Washington, D.C.
- Norton, S.B., S.M. Cormier, M. Smith, and R.C. Jones. June 2002. Predicting levels of stress from biological assessment data: regional models from the Eastern Corn Belt Plains of Ohio. North American Benthological Society Annual Meeting. Pittsburgh, PA.
- Connor, T.E. and R.C. Jones. August 2002. The dynamics of *Bosmina longirostris* and *Diaphanosoma brachyurum* in a tidal freshwater embayment. VIth International Symposium on Cladocera, Wierzba, Poland. August 2002.
- Jones, R.C. April 2003. Long-Term Trends in Water Quality in the Tidal Freshwater Potomac River. Spring 2003 Meeting of the Atlantic Estuarine Research Society, Atlantic Beach, NC.
- Jones, R.C. and D.P. Kelso. June 2005. "Trends over two decades in water quality and phytoplankton in embayment and channel sites in the tidal freshwater Potomac River, USA". American Society of Limnology and Oceanography. 2005 summer meeting. Santiago de Compostela, Spain. June 19-24.
- Interannual patterns in fish communities in the Gunston Cove area of the tidal freshwater Potomac River. Donald P. Kelso and R.Christian Jones. Poster. Estuarine Research Federation biennial meeting. Norfolk, VA. Fall 2005.
- An Overview of Ecological Studies at National Parks in the National Capital Region by George Mason University. R. Christian Jones, James Lawrey, Donald Kelso, Ted Bradley, John Dodge, Larry Rockwood and Cody Edwards. Poster. Spotlight on National Park Resources. National Capital Area. National Park Service. March 2006.
- Short-Term Variations in Water Quality at a Fixed Site on the Tidal Occoquan River. Atlantic Estuarine Research Society. Fall 2008. Poster presentation.
- Jones, R.C. 2009. "Eutrophication and partial recovery of Gunston Cove, a tidal freshwater embayment of the Potomac River as revealed by long-term monitoring." Platform presentation. Coastal and Estuarine Research Federation. 2009 Biennial Meeting. Portland, Oregon.
- Jones, R.C. and C. Buchanan. 2009. Analysis of continuous water quality monitoring data from the tidal freshwater Potomac River. Proceedings of 2009 Virginia Water Research Conference. Patrick Fay (ed) Virginia Water Resources Research Center.
- Jones, R.C. and J. Buff. 2010. "The Smithsonian-Mason Semester: How Partners can provide high Quality Mentoring, Hands-on Activities and Access to Professional Networks for Students." 2nd Annual Teaching and Learning Conference. GMU Center for Teaching Excellence.
- Bhattacharai, S. and R. C. Jones. 2011. "Influence of watershed BMP coverage on physico-chemical properties and benthic macroinvertebrates in suburban streams." Presented at Annual Meeting of the North American Benthological Society. May 2011.
- Graziano, A.P. and R. C. Jones. 2011. "Diel and Seasonal Patterns In Continuous Water Quality Monitoring Data from a Fixed Site on the Tidal Freshwater Potomac

- River”. Atlantic Estuarine Research Society. Fall 2011. Poster presentation. Won best student poster award.
- Jones, R.C. and A.P. Graziano. 2011. “Temporal Variation in Water Quality at a Fixed Monitor in the Tidal Potomac River.” Environmental Management for Enclosed Coastal Seas (EMECS) 9 conference. Baltimore, MD. August 30, 2011.
- Jones, R.C. 2011. “Eutrophication and Partial Recovery of a Shallow Embayment of the Tidal Potomac River”. Environmental Management for Enclosed Coastal Seas (EMECS) 9 conference. Baltimore, MD. August 30, 2011.
- Jones, R.C. and A.P. Graziano. 2014. “An Ecological Study of Hunting Creek: Water Quality, Plankton and Benthos”. Atlantic Estuarine Research Society. Spring 2014. Ocean City, MD.
- Moskey, K. and R.C. Jones. 2014. “Mixing Regimes and Nutrient Profiles in Two Suburban Lakes”. Atlantic Estuarine Research Society. Spring 2014. Ocean City, MD.
- Jones, R.C. and A. Fowler. 2018. “Benthic Macroinvertebrate Communities in the Tidal Freshwater Potomac River: Synthesis of Data and Index of Biotic Integrity Initiative”. Atlantic Estuarine Research Society, Spring 2018 Meeting. Poster presentation. R.C. Jones and A. Fowler. Rehoboth Beach, Delaware. April 6-7, 2018.

MAJOR REPORTS

- An Ecological Study of Gunston Cove - 1984, Final Report. August 1985. Co-authored with D.P. Kelso and P.L. deFur. 208 pp.
- An Ecological Study of Gunston Cove - 1985-86, Final Report. July 1986. Co-authored with D.P. Kelso and P.L. deFur. 164 pp. (includes section on *Daphnia* bioassays).
- Data on Physical, Chemical, and Biological Characteristics of Hydrilla Beds, Mixed Vegetation Beds, and Unvegetated Sites in the Tidal Potomac River, Maryland and Virginia, 1987. U.S. Geological Survey Open-File Report 88-709. (Co-authored with V. Carter, N.B. Rybicki, J.W. Barko, P.V. Dresler, R.E. Hickman, and R.T. Anderson). 196 pp.
- An Ecological Study of Gunston Cove - 1986-87, Final Report. September 1987. Co-authored with G.F. Warner, P.L. DeFur, and S.A. Touart. 240 pp.
- An Ecological Study of Gunston Cove - 1987-88, Final Report. October 1988. Co-authored with D.P. Kelso.
- An Ecological Study of Gunston Cove - 1988-89, Final Report. November 1989. Co-authored with D.P. Kelso. 250 pp.
- An Ecological Study of Gunston Cove - 1989-90, Final Report. August 1990. Co-authored with D.P. Kelso. 285 pp.
- An Ecological Study of Gunston Cove - 1990-91, Final Report. January 1992. Co-authored with D.P. Kelso. 159 pp.
- An Ecological Study of Gunston Cove - 1991-92, Final Report. December 1992. Co-authored with D.P. Kelso. 147 pp.
- An Ecological Study of Gunston Cove - 1992-93, Final Report. December 1993. Co-authored with D.P. Kelso. 145 pp.
- An Ecological Study of Gunston Cove - 1993-94, Final Report. February 1995. Co-

- authored with D.P. Kelso. 139 pp.
- An Ecological Study of Gunston Cove 1994-95, Final Report. December 1995. Co-authored with D.P. Kelso. 136 pp.
- An Ecological Study of Gunston Cove 1995-96, Final Report. December 1996. Co-authored with D.P. Kelso. 144 pp.
- An Ecological Study of Gunston Cove 1996-97, Final Report. December 1997. Co-authored with D.P. Kelso. 98 pp.
- Bioassessment of Occoquan Filter Wash. 1995-97. Final Report. March 1998. Co-authored with D.P. Kelso. 51 pp.
- Fort Belvoir Aquatic Studies: 1995-96. Final Report. November 1998. Co-authored with D.P. Kelso. 41 pp.
- An Ecological Study of Gunston Cove 1997-98, Final Report. August 1998. Co-authored with D.P. Kelso. 98 pp.
- An Ecological Study of Gunston Cove 1998-99, Final Report. September 1999. Co-authored with D.P. Kelso. 98 pp.
- Bioassessments of the Bull Run Watershed. 1998-99. Final Report. July 2000. Co-authored with Joanna Arciszewski. 34 pp.
- An Ecological Study of Gunston Cove 1999-2000, Final Report. November 2000. Co-authored with D.P. Kelso. 112 pp.
- An Ecological Study of Gunston Cove 2000-2001, Final Report. December 2001. Co-authored with D.P. Kelso. 169 pp.
- Bioassessment of Page Brook, Final Report. January 2002. Submitted to Clarke County, VA. Co-authored with L. Astin and K. Rowland. 36 pp.
- Bioassessment of Roseville Run Watershed. Clarke Co., VA. Final Report. March 2002. Submitted to Clarke County, VA. Co-authored with L. Astin and K. Rowland. 25pp.
- An Ecological Study of Tidal Powells Creek and the Adjacent Potomac River. Prince William County, Virginia. 2001. Final Report June, 2002. Co-authored with D.P. Kelso. 43 pp.
- Bioassessment of Spout Run, Clarke County, VA. Final Report. August 2002. Submitted to Clarke County, VA. Co-authored with R. Hansen. 31 pp.
- An Ecological Study of Gunston Cove 2001-2002, Final Report. April 2003. Co-authored with D.P. Kelso. 181 pp.
- An Ecological Study of Gunston Cove 2002-2003, Final Report. December 2003. Co-authored with D.P. Kelso.
- Aquatic Survey of NASA Goddard Space Flight Center. Main and East Campuses. 2002. Final Report. December 2003. 79 pp.
- Forested Riparian Buffer Studies: Prince William County, VA, Lancaster County, PA, Frederick County, MD. 2004. Co-authored with John Wilder. 3 CD's.
- An Ecological Study of Gunston Cove 2003-2004, Final Report. June 10, 2005. Co-authored with D.P. Kelso. 167 pp.
- Forested Riparian Buffer Study-Phase II. Counties of Henrico, Spotsylvania, and James City, Virginia; County of Prince Georges, Maryland and County of Dauphin, Pennsylvania. Final Report. August 2006.
- An Ecological Study of Gunston Cove 2004-2005, Final Report. February 28, 2007. Co-

- authored with D.P. Kelso. 219 pp.
- An Ecological Study of Gunston Cove 2006, Final Report. May 1, 2008. Co-authored with R. Kraus and D.P. Kelso. 131 pp.
- An Ecological Study of Gunston Cove 2007. Final Report. October 24, 2008. Co-authored with R. Kraus and D.P. Kelso. 136 pp.
- An Ecological Study of Gunston Cove 2008. Final Report. December 2009. Co-authored with R. Kraus. 145 pp.
- R.C. Jones, B. Holstein, A. Hailegiorgis, and D.Parker. 2009. Low-Impact Development Stormwater Best Management Practices For Residential Retrofit: A Literature Review and Scenario Analysis for Potomac Gorge Watersheds. Draft Final Report for project: “Development of a spatially explicit participatory model to explore anthropogenic off-site threats to resources of the Potomac Gorge” December 2009. 30 pp + Appendix.
- An Ecological Study of Gunston Cove 2009. Final Report. December 2010. Co-authored with R. Kraus. 144 pp.
- An Ecological Study of Gunston Cove 2010. Final Report. November 2011. Co-authored with R. Kraus. 144 pp.
- Continuous Monitoring of Water Quality at Pohick Bay for 2011: An Analysis of Daily Averages. Co-authored with A. Graziano. 15 pp.
- An Ecological Study of Gunston Cove 2011. Final Report. September 2012. Co-authored with K. DeMutsert. 140 pp.
- Fairfax City Stream Monitoring: 2008-2012. Summary Report and Analysis. February 2013. Co-authored with A. Graziano. 17 pp.
- An Ecological Study of Gunston Cove 2012. Final Report. September 2013. Co-authored with K. DeMutsert. 139 pp.
- An Ecological Study of Hunting Creek 2013. Final Report. February 2014. Co-authored with K. DeMutsert and G. Foster. 130 pp.
- An Ecological Study of Gunston Cove 2013. Final Report. September 2014. Co-authored with K. DeMutsert. 150 pp.
- An Ecological Study of Hunting Creek 2014. Final Report. May 2015. Co-authored with K. DeMutsert, R.B. Jonas, and G.D. Foster. 132 pp.
- An Ecological Study of Gunston Cove 2014. Final Report. September 2015. Co-authored with K. DeMutsert. 152 pp.
- An Ecological Study of Hunting Creek 2014. Final Report. July 2015. Co-authored with K. DeMutsert, R.B. Jonas, and T. Huff. 132 pp.
- An Ecological Study of Gunston Cove 2015. Final Report. September 2016. Co-authored with K. DeMutsert. 147 pp.
- R.C. Jones, K. deMutsert, and A. Fowler. 2017. “An Ecological Study of Gunston Cove: 2016”. Final Report. August 2017. 194 pp. Submitted to Fairfax County Department of Public Works and Environmental Services. (Draft extensively reviewed by Fairfax County engineers and scientists. Changes incorporated in final report.)
- R.C. Jones, K. deMutsert, R. Jonas, G. Foster, T. Huff, and A. Fowler. 2018. “An Ecological Study of Hunting Creek: 2017”. Final Report. March 2018. 185 pp. Submitted to Alexandria Renew Enterprises.

RESEARCH GRANTS

- University Research Grants Program, George Mason University, "Photosynthetic adaptation by freshwater algal communities to variations in ambient light regime", December 1980 - May 1981. Funded: \$1500.
- University Research Grants Program, George Mason University, " A Survey of Four Fairfax County Lakes", December 1980 - May 1981. Funded: \$150.
- Subcontract on EPA grant to NUSAC, Inc., McLean, Va., "Analysis of Phytoplankton Communities in Lakes Accotink and Fairfax", January 1980 - August 1981. Funded: \$1812.
- Subcontract on EPA grant to NUSAC, Inc., McLean, Va., "Algal assays of Lakes Accotink and Fairfax", March 1980 - August 1981. Funded: \$2338.
- NSF Multiuser Equipment Request for a scintillation counter. (Co-PI). January 1981. Funded: \$15,660.
- University Research Grants Program, George Mason University. "The Effect of Urban Development on Stream Benthos Communities". May 1982 - April 1983. Funded: \$300.
- University Research Grants Program, George Mason University. "The Effect of Acid Precipitation on Benthic Insect Communities in an Appalachian Stream". May 1983 - April 1984. Funded: \$1350.
- Virginia Water Resources Research Center, Blacksburg, Virginia. "Effects of Land Use Practices on Water Resources". July 1983 - June 1984. Funded: \$34,349.
- Fairfax County, Virginia. "An Ecological Study of Gunston Cove, Virginia". (Co-PI). February 1984 - February 1985. Funded: \$97,052.
- Greendale Development Company. "An Ecological Analysis of the Kingstowne Ponds Area". August 1985-September 1985. Funded: \$2,982.
- Metropolitan Washington Council of Governments. "Potomac Algal Bloom Studies". August 1985-July 1986. Funded: \$6,859.
- Fairfax County, Virginia. "An Ecological Study of Gunston Cove - 1985-86". July 1985-June 1986. Funded: \$45,000.
- Fairfax County, Virginia. "An Ecological Study of Gunston Cove - 1986-87". July 1986-July 1987. Funded: \$60,000.
- Metropolitan Washington Council of Governments. "A Study of Nutrient Limitations to Algal Growth in the Potomac River." August 1986-April 1987. Funded: \$8,000.
- National Park Service. "Submerged Aquatic Vegetation as a Biological Habitat in the Tidal Freshwater Potomac." August 1987-February 1988. Funded: \$10,000.
- Virginia Beef Corporation. "Monitoring of Benthic Invertebrates in Bolling Branch." April 1987-April 1989. Funded: \$2,657.
- Fairfax County, Virginia. "An Ecological Study of Gunston Cove - 1987-88." July 1987-June 1988. Funded: \$80,000.
- Fairfax County, Virginia. "An Ecological Study of Gunston Cove - 1988-89." July 1988-June 1989. Funded: \$97,512.
- Fairfax County, Virginia. "An Ecological Study of Gunston Cove - 1989-90." July 1989-June 1990. Funded: \$89,495.

- Fairfax County, Virginia. "An Ecological Study of Gunston Cove - 1990-91." July 1990-June 1991. Funded: \$100,000. (Co-PI).
- Fairfax County, Virginia. "An Ecological Study of Gunston Cove - 1991-92." July 1991-June 1992. Funded: \$81,613.
- Metropolitan Washington Council of Governments. "Risk Assessment of Nitrogen-Fixing Algae." August 1991-May 1993. Funded: \$8,000.
- National Science Foundation. Instrumentation and Instrument Development Program. "Acquisition of a High-Performance Liquid Chromatography System". June 1992-May 1993. Approved, but not funded due to prior SRIF acquisition: \$42,000.
- District of Columbia Government. Water Quality Research Grant Program. "Taxonomic Identification of Phytoplankton and Zooplankton Samples from the Tidal Potomac River and its Tributaries." September 1992- December 1996. Awarded: \$40,873.
- Fairfax County, Virginia. "An Ecological Study of Gunston Cove - 1992-93." July 1992-June 1993. Funded: \$86,053.
- Fairfax County, Virginia. "An Ecological Study of Gunston Cove - 1993-94." July 1993-June 1994. Funded: \$96,661.
- U.S. Environmental Protection Agency. "Bioassessment of Suburban Nonpoint Pollution in Prince William County, Virginia". September 1993-May 1994. Funded: \$40,000.
- Black and Veatch Engineers & Architects. "Ecological Assessment of Occoquan Water Plant Filter Wash". November 1993-October 1998. Funded: \$52,580.
- Fairfax County, Virginia. "An Ecological Study of Gunston Cove - 1994-95." July 1994-June 1995. Funded: \$81,613.
- Northern Virginia Planning District Commission. "Bioassessment of Nonpoint Source Impacts in a High Priority Northern Virginia Watershed". January 1994-September 1995. Funded: \$30,215. [This was actually EPA money which was passed through the local planning agency to the university].
- George Mason University. Interdisciplinary Research Assistantship. "Role of Science and Policy in Resolving Wetlands-Stormwater Management Conflicts". (with Dr. Louise White, Department of Public Policy, GMU). September 1994-May 1995. Funded: \$8,000.
- GKY Associates. "Analysis of Lake Barcroft Plankton Samples." May 1995-December 1995. Funded: \$876.
- Fairfax County, Virginia. "An Ecological Study of Gunston Cove - 1995-96." July 1995-June 1996. Funded: \$81,613.
- Interstate Commission on the Potomac River Basin. "Upper Potomac Estuary Integrative Analysis Project". September 1995-August 1996. Funded: \$22,424.
- U.S. Army Garrison Fort Belvoir. "Fort Belvoir Aquatic Studies." September 1995-September 1996. Funded: \$24,979.
- GKY Associates. "Analysis of Lake Barcroft Plankton Samples." June 1996-December 1996. Funded: \$902.
- Prince William County, Virginia. "Bioassessment of Prince William County Watersheds." June 1996-December 1997. Funded: \$53,185.

- U.S. Army Garrison Fort Belvoir. "Fort Belvoir Aquatic Studies." September 1996-September 1997. Funded: \$25,000.
- Fairfax County, Virginia. "An Ecological Study of Gunston Cove - 1996-97." July 1996-June 1997. Funded: \$40,807.
- Metropolitan Washington Council of Governments. "Examination of the Baseline Status of Water Quality and Phytoplankton in the Tidal Potomac River Prior to the Initiation of Denitrification at Blue Plains: 1991-1993". February 1-June 30, 1997. Funded: \$3,415.
- Interstate Commission on the Potomac River Basin. "Integrative Assessment of the Non-tidal Potomac River." March -September 1997. Funded: \$11,383.
- Clarke County, Virginia. "Bioassessments of Page Brook." May 1997-January 1999. Funded: \$6,691
- Fairfax County, Virginia. "An Ecological Study of Gunston Cove - 1997-98." July 1997-June 1998. Funded: \$40,807.
- Washington Metropolitan Council of Governments. "Denitrification Water Quality Survey". July 1997-June 1998. Funded: \$18,643.
- Fairfax County, Virginia. "An Ecological Study of Gunston Cove - 1998-99." July 1998-June 1999. Funded: \$51,953.
- Metropolitan Washington Council of Governments. "Denitrification Water Quality Survey: 1998" July 1998-January 1999. Funded: \$18,637.
- Prince William County, Virginia. "Bioassessment of Bull Run and its Tributaries." June 1998-June 2000. \$13,054.
- Clarke County, Virginia. "Bioassessments of Roseville Run." May 1998-April 2000. Funded: \$5,404.
- Fairfax County, Virginia. "An Ecological Study of Gunston Cove - 1999-2000." July 1999-June 2000. Funded: \$51,953.
- Virginia Water Resources Research Center. "Development of Predictive Relationships between Stressors and Macrobenthic Communities for Use in Implementing TMDL's". July 1999-June 2001. Funded: \$68,312.
- Clarke County, Virginia. "Bioassessments of Spout Run". September 1999-January 2002. Funded: \$6,627.
- Fairfax County, Virginia. "An Ecological Study of Gunston Cove - 1999-2000." July 1999-June 2000. Funded: \$58,260.
- USGS Patuxent Wildlife Research Center. Identification and relative abundance of plankton samples from Chesapeake Bay. July-August 2001. Funded: \$2300+\$644.
- Fairfax County, Virginia. "An Ecological Study of Gunston Cove - 2000-2001." July 2000-June 2001. Funded: \$54, 537.
- Piedmont Environmental Council. "Baseline Ecological Survey of Tidal Powells Creek". May 2001-January 2002. Funded: \$7,909.
- National Aeronautics and Space Administration. "Studies to Support NASA's Commitment to Environmental Quality at its Facilities Within the Chesapeake Bay Watershed". July 1, 2001 - January 31, 2002. Funded: \$99,360.
- Fairfax County, Virginia. "An Ecological Study of Gunston Cove - 2001-2002." July 2001-June 2002. Funded: \$54, 537.

- National Aeronautics and Space Administration. "Studies to Support NASA's Commitment to Environmental Quality at its Facilities Within the Chesapeake Bay Watershed". September, 2002 - September, 2003. Funded: \$98,500.
- USGS Patuxent Wildlife Research Center. "Identification and Relative Abundance of Plankton Samples from Chesapeake Bay. May-September 2002. Funded: \$1748.
- USGS Reston. "Biodegradation of Chlorinated Solvents in Freshwater Wetland" July 2002-July 2003. Funded: \$25,000.
- Fairfax County, Virginia. "An Ecological Study of Gunston Cove - 2002-2003." July 2002-June 2003. Funded: \$54, 537.
- Virginia Department of Environmental Quality. "Development of TMDL's for Virginia Streams on the 2004 Commitment List". February 2003-December 2004. Funded: \$146,156.
- Virginia Department of Forestry. "Stream Community Structure: An Analysis of Riparian Forest Buffer Restoration in the Chesapeake Bay Watershed". May 2003-April 2004. (with Leslie Orzetti). Funded: \$12,634
- National Park Service. "Summary Compendium of Watershed Condition Assessment Methods". October 2003-December 2006. (with Candy Bartoldus) \$247,571.
- USDA Forest Service. "Conservation of Riparian Forest Buffers in the Chesapeake Bay: A GIS-based Historical Analysis of Buffer Conservation-Phase I". July – December 2003. \$51,015.
- Fairfax County, Virginia. "An Ecological Study of Gunston Cove - 2003-2004." July 2003-September 30, 2004. Funded: \$54, 537.
- Fairfax County, Virginia. "An Ecological Study of Gunston Cove - 2005." March 2005-February 2006 Funded: \$52,294.
- National Park Service. "Inventory of Vascular Plants of Prince William Forest Park of the National Capital Region". (took over from Ted Bradley) June 2005-December 2005. \$19,047.
- USDA Forest Service. "Conservation of Riparian Forest Buffers in the Chesapeake Bay: A GIS-based Historical Analysis of Buffer Conservation-Phase II". August 2005-May 2006. \$60,000.
- National Park Service. "Research Conference: Spotlight on National Park Resources. National Capital Area. National Park Service.". \$2,500. Spring 2006.
- National Park Service. "Development of a spatially explicit participatory model to explore anthropogenic off-site threats on rare aquatic resources of the Potomac Gorge". (Dawn Parker PI). August 31,2005 to September 20, 2010. \$130,000.
- Fairfax County, Virginia. "An Ecological Study of Gunston Cove - 2007." March 2007-February 2008 Funded: \$82,078.
- Fairfax County, Virginia. "An Ecological Study of Gunston Cove – 2008." April 1, 2008-March 31, 2009. Funded: \$67,880.
- Plangraphics, Inc. "Fairfax County Natural Area Geospatial Analysis". Subcontract on project from Fairfax County Park Authority. December 2007-December 2008. Funded: \$22, 117.
- Virginia Environmental Endowment. "Tidal Potomac Teacher Training Workshop". April 1, 2008 – March 31, 2009. Funded: \$7,515.
- Chesapeake Bay Restoration Fund. "Tidal Potomac Teacher Training Workshop". April

- 1, 2008 – March 31, 2009. Funded: \$3,223.
- Institute for Conflict Analysis and Resolution. “Water Quality Monitoring of Thompson Creek and Nearby Belmont Bay.” April 1, 2008-December 31, 2008. Funded: \$7,000 (internal Mason funds).
- City of Fairfax, Virginia. “Water Quality Testing in Fairfax City”. December 1, 2008-June 30, 2009. Funded: \$5,638.
- National Oceanic and Atmospheric Administration. Bay Watershed Education and Training Program (BWET). “From the Mountains to the Estuary: From the Schoolyards to the Bay”. Watershed education program for Prince William County Public Schools. June 1, 2009-May 31, 2012. Proposal accepted: \$330,000.
- National Park Service. “Development of a spatially explicit participatory model to explore anthropogenic off-site threats on rare aquatic resources of the Potomac Gorge”. (took over grant from Dawn Parker and completed report). August 31, 2005 to September 20, 2010. \$130,000.
- Interstate Commission on the Potomac River Basin. “Flow-ecology relationships in the Potomac River Basin.” July 1, 2009 – June 30, 2010. \$12,552.
- Fairfax County, Virginia. “An Ecological Study of Gunston Cove – 2009.” July 1, 2009-June 30, 2010. Funded: \$50,852.
- Fairfax County, Virginia. “An Ecological Study of Gunston Cove – 2010.” July 1, 2010-June 30, 2011. Funded: \$50,852.
- Fairfax County, Virginia. “An Ecological Study of Gunston Cove – 2011.” July 1, 2011-June 30, 2012. Funded: \$50,852.
- Metropolitan Washington Council of Governments. “Microcystis Bloom Sampling and Analysis – 2011”. August 8, 2011 – October 31, 2011. Funded: \$3,154.
- Fairfax County, Virginia. “An Ecological Study of Gunston Cove – 2012.” July 1, 2012-June 30, 2013. Funded: \$55,543.
- Fairfax City, Virginia. “City of Fairfax Monitoring Program 2011-12”. October 28, 2011-September 30, 2012. \$9,835.
- Fairfax City, Virginia. “City of Fairfax Monitoring Program 2012-13”. December 15, 2012-December 14, 2013. \$3,381.
- Alexandria Renew Enterprises. “An Ecological Study of Hunting Creek – 2013”. February 1, 2013 – January 31, 2014. Funded: \$97,757.
- Academy of Natural Science of Drexel University. “Collaboration in Algal Ecology”. October 20, 2012 – October 19, 2013. Funded: \$2,700.
- Prince William County Public Schools. “Support for BWET Field Interpreters – 2013.” March 1, 2013 – October 31, 2013. Funded: \$5,000.
- Fairfax County, Virginia. “An Ecological Study of Gunston Cove – 2013.” July 1, 2013-June 30, 2014. Funded: \$56,447.
- National Park Service. “Resource Management Internship Program”. September 1, 2013-December 31, 2018. Funded: \$160,688.
- Academy of Natural Science of Drexel University. “Collaboration in Algal Ecology”. October 20, 2013 – October 19, 2014. Funded: \$2,700.
- Fairfax City, Virginia. “City of Fairfax Monitoring Program 2014-15”. March 1, 2014-February 28, 2015. \$3,776.
- Alexandria Renew Enterprises. “An Ecological Study of Hunting Creek – 2013”. April 1,

- 2013 – January 31, 2014. Funded: \$163,080.
- National Park Service. “Monitoring Benthic Macroinvertebrates” August 15, 2014 – June 15, 2017. Funded: \$73,042.
- Fairfax County, Virginia. “An Ecological Study of Gunston Cove – 2014.” July 1, 2014– June 30, 2015. Funded: \$60,764
- Fairfax City, Virginia. “City of Fairfax Monitoring Program 2015-16”. May 1, 2015-June 30, 2016. \$3,723.
- Alexandria Renew Enterprises. “An Ecological Study of Hunting Creek – 2014”. April 1, 2014 – January 31, 2015. Funded: \$163,080.
- Fairfax County, Virginia. “An Ecological Study of Gunston Cove – 2015/16.” July 1, 2015-June 30, 2016. Funded: \$61,331.
- Alexandria Renew Enterprises. “An Ecological Study of Hunting Creek – 2015”. March 15, 2015 – March 14, 2016. Funded: \$132,216.
- Alexandria Renew Enterprises. “Hunting Creek Research Assistant”. December 9, 2015 – May 24, 2016. Funded: \$14,704.
- Alexandria Renew Enterprises. “Hunting Creek Research Assistant Summer 2016”. May 26, 2016 – August 26, 2016. Funded: \$4,271.
- Alexandria Renew Enterprises. “An Ecological Study of Hunting Creek – 2016”. March 15, 2016 – March 14, 2017. Funded: \$149,508.
- Fairfax County, Virginia. “An Ecological Study of Gunston Cove – 2016-17.” July 1, 2016-June 30, 2017. Funded: \$67,561 (sponsor amount).
- City of Fairfax, Virginia. “City of Fairfax Monitoring Program”. July 1, 2016 – August 30, 2017. \$4,309.
- Alexandria Renew Enterprises. “An Ecological Study of Hunting Creek – 2017”. March 15, 2017 – March 14, 2017. \$167,481.
- Alexandria Renew Enterprises. “An Ecological Study of Hunting Creek: Research Assistantship” April 26, 2016 – August 24, 2017. \$12,100.
- “An Ecological Study of Hunting Creek – 2017”. Alexandria Renew Enterprises. March 15, 2017 – April 14, 2018. \$167,481. (all through Mason, full overhead)
- “An Ecological Study of Hunting Creek – 2018”. Alexandria Renew Enterprises. April 1, 2018 – September 30, 2018. \$126,140. (all through Mason, full overhead)*
- “An Ecological Study of Gunston Cove – 2017/18”. Fairfax County Department of Public Works and Environmental Services. July 1, 2017 – June 30, 2018. \$70,213. (all through Mason, full overhead)
- “City of Fairfax Monitoring 2017/18”. City of Fairfax. October 1, 2017 – September 30, 2018. \$4,357. (all through Mason, full overhead)
- “Annimox Research Assistant”. Alexandria Renew Enterprises. August 25, 2017 – August 24, 2018. \$10,706. (all through Mason)
- “Water Trail Mile Marker Installation” NOVA Parks (Northern Virginia Regional Park Authority). April 1, 2018 – July 31, 2018. \$3,793. (all through Mason)

UNIVERSITY SERVICE

Department of Environmental Science and Policy
 Executive Committee, 2000-2001.
 Interim Chair, 2001-2002.

CAS Council Representative, Fall 2001
 Chair, 2002-2008
 Committee on Committees, 2006-2010
 Graduate Executive Committee, 2012-2014, 2017-

Department of Biology

Seminar Committee, 1980-81.
 Undergraduate Committee, 1981-82.
 Biology Chair Search Committee, 1981-82.
 Library Committee, Member: 1981-82; Chairman: 1982-84.
 Library Liaison, 1984-85.
 Environmental Biology-Public Policy Ph.D. Curriculum Committee, 1980-present.
 Computer Committee, 1986-87.
 Teaching and Peer Evaluation Committee, 1985-86.
 Seminar Organizer, Department of Biology, 1988-89.
 Biology Chair Search Committee, 1988-89.
 By-Laws Committee, 1990-91.
 Environmental Science-Public Policy Executive Committee, 1992-95.
 Long-range Planning Committee, 1992-93
Ad-hoc Promotion and Tenure Committee for M. Walbridge, Chair, 1994
 Biology Chair Review Committee, 1995
 Committee on Committees, Chair, 1996
 Chair's Annual Review Committee, 1997
Ad-hoc Contract Renewal Committee for J. Megonigal, 1997
 Space Committee, 1997
Ad-hoc Contract Renewal Committee for C. Hamblin-Katnik, 1998
 Committee on Committees, 1999
 Chair's Advisory Committee, 1999
 Bylaws Committee, 2000
 Chair, Search Committee, Lab Supervisor (Dhia Marcavage hired)
 Chair, Search Committee, EVPP 110/111 Course Leader (Kim Largen hired)
 Chair, Search Committee, Human Ecologist term position (Emily Harwell hired)
 Search Committee, Wetland Ecologist tenure track position (Changwoo Ahn hired)
 Planning Committee for Talbot Festschrift

University Committees

Compensation and Benefits Committee, CAS, 1982-84.
 University Library Committee, 1988-90.
 Graduate Dean Search Committee, 1987.
 Graduate Dean Search Committee, 1989.
 Coordinating Committee, Southeastern Association of Colleges and Schools Accreditation Review, 1990.
Ad-hoc Committee on General Education, College of Arts and Science, 1995.

Promotion and Tenure Committee, College of Arts and Sciences: 1995-96.
 Corresponding Secretary, CAS Council, 1997-98.
 CAS Scholarly Committee, 1997-98.
 Chair, College of Arts and Sciences Council, 1998-99
 Faculty Senate, 1999-2002
 Faculty Senate Academic Policies Committee, 1999-2001
 ESP Representative to Science Ring
 Chair, Committee for Restructuring of the Biosciences (a.k.a, Biocommittee)
 Worked with Hal Gortner to obtain MOU of cooperation with ESRI
 Search Committee, Professor and GIS Center Director
 Chair, Geography Chair Search Committee
 Committee to plan GIS lab for Innovation Hall
 Belmont Bay Aquatic Science Facility, Planning Committee
 College of Science, Nominations Committee, 2007-2008.
 College of Science, Grievance Committee, 2008-2009.
 College of Science, Executive Council, 2012-14
 College of Science, Promotion and Tenure Advisory Committee, 2013-16

PROFESSIONAL SERVICE

Virginia Academy of Sciences, Local Arrangements Committee, 1983.
 National Science Foundation, Review Panel, Ecology Program, 1985.
 Virginia Air Control Board, Technical Advisory Committee, 1985-86.
 Virginia Water Resources Research Center, Technical Advisory Committee, 1987-92.
 Virginia Water Control Board, Technical Advisory Committee, Nutrient Control Standards, 1987.
 Potomac Regional Monitoring Committee, 1987-present
 Potomac River Living Resources Task Force, 1988-92.
 National Science Foundation, Proposal Reviewer, 1990.
 American Society of Limnology and Oceanography, Meeting Mentor for minority students, 1991.
 Virginia Academy of Sciences, Environmental Sciences Section Secretary and Editor, 1990-1994.
 Potomac Technical Studies Committee, Metropolitan Washington Council of Governments, 1991-present
 Senate of the Commonwealth of Virginia, Technical Task Force on Stormwater Mangement Policy, 1994.
 Virginia Academy of Sciences, Environmental Sciences, Chair, 1995-96.
 Virginia Lakes and Watersheds Association, Program Committee, 1996.
Marine Ecology Progress Series, Journal Article Reviewer, 1996-97.
 External Reviewer, Environmental Science major, Ramapo College, Mahwah, NJ, 1999.
 Biomonitoring Subcommittee of the Virginia Water Quality Academic Advisory Committee, 1999-present.
 Atlantic Estuarine Research Society, Chair, Endowment Committee, 2000-2006.
 Host and Reviewer, Participant Selection Committee for Dissertation Initiative for the

Advancement of Coastal and Estuarine Science (DIACES), Summer 2002
Environmental Monitoring and Assessment, Journal Article Reviewer, 2011.

GRADUATE STUDENTS DIRECTED

Ph.D.

- Larry Puckett. 1988. Biological, chemical, and physical factors controlling the chemistry of throughfall precipitation.
- Jack Harper. 1988. Effects of summer storms on the phytoplankton of a tidal Potomac River embayment.
- Claudia Hamblin-Katnik. 1993. An examination of U.S. EPA water quality criteria with reference to the exceedence of criteria within U.S. streams.
- James Coles. 1994. The effects of temperature and light intensity on the dynamics of dominant Potomac River phytoplankton.
- Roy Jacobsen. 1995. Modeling functional properties of constructed wetlands for treating acid mine drainage. (co-directed with Mark Brinson).
- Julie Mann. 1997. Riverine wetland function and human-induced ecological disturbance: a watershed perspective.
- Susan Norton. 1999. Using biological monitoring data to distinguish among types of stress in streams of the Eastern Corn Belt Plains ecoregion.
- Daniel Sklarew. 2000. Tidal freshwater Potomac River eutrophication: patterns and relations to climate change, nutrient management, and in situ factors.
- Nancy Rybicki. 2000. Relationships between environmental variables and species of submersed aquatic vegetation in the Potomac River, 1985-1997.
- Saiful Islam, Fall 2001. Seasonal dynamics of micro-, nano-, and picoplankton in the tidal freshwater Potomac River in and around Gunston Cove.
- Chulaporn Muniganondh, Spring 2002. Spatial relationships between demographic and socioeconomic characteristics and leaking petroleum underground storage tanks in Arlington County, Virginia.
- Allyson M. Via, Spring 2003. The effects of watershed development on the structural and functional ecology of forested Piedmont stream benthic communities.
- Leslie Orzetti, Summer 2004. Stream community structure: an analysis of riparian forest buffer restoration in the Chesapeake Bay watershed.
- Cindy Smith, Fall 2004. Distribution and abundance of macroinvertebrate communities in artificial beds of submerged aquatic vegetation (SAV).
- Theresa Connor, Spring 2005. Temperature and food as factors affecting the population ecology of *Bosmina longirostris* (O.F. Muller, 1785) and *Diaphanosoma brachyurum* (Lieven, 1848).
- Ryan Albert, Spring 2007. The influence of past and future urbanization on watershed nitrogen export and hydrology dynamics in two mid-Atlantic watersheds in Fairfax, Virginia.
- Sammer Bhattarai, Spring 2011. The response of streams to land use and urban best management practices in the piedmont region of Virginia, USA.

- Kevin Brittingham, Spring 2011. Benthic macroinvertebrate communities of reconstructed freshwater tidal wetlands in the Anacostia River, Washington, D.C.
- Richard Friesner. Spring 2016.
- Richard Groover. Spring 2017.
- In progress students: Natalie Hall, Kristyn DeMarco, Suzee Poudel,.

Masters (thesis)

- William Swietlik. 1981. The effects of acute acidification upon benthic insects in headwater streams in the Shenandoah National Park, Virginia.
- Jeanne Jabara Edson. 1983. Phytoplankton succession in Lake Fairfax, Virginia: a disturbed urban lake.
- Herbert Ray. 1986. The effects of acidification on the benthic insect community of Mill Run, Virginia.
- Sue Anne Touart. 1988. Seasonal and spatial distribution of ichthyoplankton of Gunston Cove, a freshwater tidal embayment.
- John Galli. 1988. A limnological study of an urban stormwater management pond and stream ecosystem.
- Kathy Monk. 1988. The influence of submerged aquatic vegetation on zooplankton abundance and diversity in the tidal freshwater Potomac River.
- Allan Hide. 1989. The effects of zooplankton grazing on phytoplankton biomass and species composition in an hypereutrophic tidal freshwater river.
- Susan R. Kircher. 1990. The effect of pH on the release of phosphorus from the sediments of Gunston Cove, Virginia.
- William Oerlein. 1990. Sediment phosphorus available to phytoplankton as a function of pH in Pohick Bay, Virginia.
- Steve Blumenshine. 1992. Spatial and temporal variation in the diet of the White Perch, *Morone americana*, in a tidal freshwater embayment.
- Angela Thorp. 1992. The role of submersed aquatic vegetation in structuring macroinvertebrate communities in the tidal Potomac River.
- Teresa Connor. 1992. Field and laboratory studies of the population dynamics, survival, and reproduction by *Bosmina longirostris*.
- Mike Nicklesburg. 1995. A water quality assessment of the Huntley Meadows watershed, Fairfax County, Virginia. (Co-directed with Fran Heliotis)
- Steve Winesett. 1996. The impact of heavy metals on Diptera: Chironomidae in the tidal freshwater Potomac River.
- Amy Maher. 1999. The effect of land use on stream quality in Prince William County, Virginia.
- Joanna Arciszewski. 1999. Biological assessment of Bull Run and its tributaries.
- Demson Fuller. 1999. Project student.
- LeAnne Astin. 2000. Bioassessment of BMP effectiveness in an agriculturally impacted watershed in Clarke County, Virginia.
- Gary Long. Summer 2001. Determination of environmental stressors influencing benthic invertebrate community structure : a multivariate statistical

approach.

Stephanie Backer. Spring 2002. Project. Quantitating the abundance of iron-reducing and iron-oxidizing bacteria in the rhizosphere of *Typha latifolia*. Co-directed with Pat Megonigal.

Rebecca Thomas. Summer 2002. Benthic macroinvertebrate variations due to different stream impacts in the York River watershed.

Ryan Hansen. Summer 2003. Aquatic macroinvertebrate communities in two agriculturally impacted streams in Northern Virginia and an evaluation of fencing as a best management practice.

Jeanet Ewing. Spring 2004. A quantitative analysis of phytoplankton in the tidal freshwater Potomac River using high performance liquid chromatography.

Shannan Wheat. Spring 2004. Seasonal patterns of stratification, nutrient concentrations, and chlorophyll a in a mid-Atlantic pond.

Laura McGee. Spring 2005. Effects of watershed land use patterns on benthic macroinvertebrate biotic integrity in Northern Prince George's County, MD, USA.

Iyad Aburdeineh. Summer 2007. Impact of land use on nitrate concentration and streamwater physical parameters : a study of selected Fairfax County streams.

Sara Clark. Fall 2007. Characterization of water quality in the tidal Occoquan River using continuous monitoring.

Maura Browning. Summer 2008. The efficacy of urban stream restorations to improve water quality across a spectrum of design approaches

Andrew Sheffield. Spring 2011, project student.

Marta Vastagh, Spring 2011, project student.

Eileen Flynn. Spring 2012. Individual-based model (IBM) predicting impacts of climate change on diversity in a representative submerged aquatic vegetation (SAV) community of the Chesapeake Bay

Alex Graziano

Marissa Washington

Erin Stocksclaeder

Larin Isdell. Fall 2017. Thesis student almost done. Posthumous degree awarded. Current M.S. Students: Morgan Collier, Emily Vortek.

Hobbies:

Running: completed 3 half marathons since 2006 (time about 2 hrs), 3 10-miler, and 2 10-K races

Photography: show at Rochester gallery

Singing: Reston Chorale, Church choir, RSCM Choir Camp (three years), voice lessons