

BOWEN, JAMES D.

Interim Chair, Associate Professor, Civil and Environmental Engineering Department, UNC Charlotte, 9201 University City Blvd, Charlotte, NC 28223, 704-687-1215, jdbowen@unc.edu

Professional Preparation

- Duke University, Botany, A.B., 1979
- Vanderbilt University, Civil and Environmental Engineering, M.S., 1983
- Massachusetts Institute of Technology, Civil Engineering, Ph.D., 1990

Appointments

- 2017–** Interim Chair, Civil and Environmental Engineering (CEE) Department, University of North Carolina at Charlotte, Charlotte NC.
- 2003–** Associate Professor, CEE Department, UNC Charlotte, Charlotte NC.
- 1996–2003** Assistant Professor, Engineering Technology Department (1996-2000), Civil Engineering Department, UNC Charlotte, Charlotte NC.
- 1993–2000** Lecturer/Adjunct Professor, Tufts University (1993-1994), Massachusetts Institute of Technology (1994-1995), Duke University (2000).
- 1990–1996** ENSR Consulting and Engineering, Acton, Massachusetts. Project Manager/Surface Water Quality Section Manager.
- 1984–1989** Department of Civil Engineering, Massachusetts Institute of Technology, Cambridge, Massachusetts. Research Assistant.

Five Publications Most Closely Related to the Proposed Project

- Harrigan, N. and Bowen, J.D. 2016. Three for the Price of Two? A comparison of circulation in the Neuse River Estuary predicted by a two and three-dimensional model, Water Smart Innovations Conference 2016.
https://www.watersmartinnovations.com/documents/poster_sessions/2016/P-18.pdf
- Froelich, Brett, James Bowen, Raul Gonzalez, and Rachel Noble. 2013. Mechanistic and Statistical Models of Total *Vibrio* Abundance in the Neuse River Estuary, Water Research 47 (15), 5783-5793.
- Hieronimus, J., and J. D. Bowen. 2005. Calibration and Verification of a Two-Dimensional, Laterally Averaged Mechanistic Model of the Neuse River Estuary, Report No. 343-C, UNC Water Resources Research Institute, N. C. State Univ., Raleigh, NC.
- Bowen, J. D., and J. W. Hieronimus. 2003. A CE-QUAL-W2 Model of Neuse Estuary for Total Maximum Daily Load Development. *J. of Water Resources Planning and Management*. 129(4): 283-294.
- Bowen, James D., and Hieronimus, Jeffrey W. 2000. Neuse River Estuary Modeling and Monitoring Project Stage 1: Predictions and Uncertainty Analysis of Response to Nutrient Loading Using a Mechanistic Eutrophication Model. Report 325-D, Water Resources Research Institute of the University of North Carolina, Raleigh, NC.

Five Other Significant Publications

- Kim, Dongwook, Bowen, James D., and Kinnear, David. 2015. Comprehensive numerical modeling of greenhouse gas emissions from water resource recovery facilities. *Water Environment Research*. 87(11), 1955-1969.
- Kim, Dongwook, Bowen, James D., and Ozelkan, Ertunga C. 2015. Optimization of wastewater treatment plant operation for greenhouse gas mitigation. *Journal of Environmental Management*, Vol. 163, 1 Nov 2015, 39-48.
- Stow, C. A., C. Roessler, M. E. Borsuk, J. D. Bowen, and K. H. Reckhow. 2003. Comparison of Estuarine Water Quality Models for Total Maximum Daily Load Development in Neuse River Estuary. *J. of Water Resources Planning and Management*. 129(4): 307-314.
- Bowen, J.D., K.D. Stolzenbach, and S.W. Chisholm. 1993. Simulating Bacterial Clustering Around Phytoplankton in a Turbulent Ocean. *Limnology and Oceanography*. 38(1): 36 - 51.
- Bowen, J. D., and Stolzenbach, K. D. 1992. The Concentration Distribution Near a Continuous Point Source in Steady Homogeneous Shear. *Journal of Fluid Mechanics*. Vol. 95, p. 95 - 110.

Synergistic Activities

Member ASLO, ERF, AGU, ASCE, ASEE. Stakeholder Group Member, Charlotte/Mecklenburg Post-Construction Controls Ordinance Development (2004-2006). Member, Charlotte Mecklenburg Stormwater Advisory Committee. Member, NC Nutrient Criteria Development Plan, Science Advisory Board. Frequent reviewer for Water Research, Estuarine and Coastal Shelf Science, Environmental Management, J. of Environmental Management, UNC Charlotte College of Engineering, Graduate (2003) and Undergraduate (2007) Excellence in Teaching Awards, UNC Charlotte Provost's Award for Teaching Excellence (2014, Dept. award), Site coordinator for a seasonal homeless shelter at Avondale Presbyterian Church (2010-2014).

Collaborators and Other Affiliations

Collaborators and Co-Editors: J. Daniels, H. Hilger, J. Wu – UNC Charlotte; B. Borden, R. Ranjithan - NCSU; M. Alperin, G. Characklis, R. Luettich, R. Noble, H. Paerl, M. Piehler, University of North Carolina; K. Reckhow - Duke U.; C. Stow - GRERL.; M. Borsuk – Dartmouth College; G. Feuillade, G. Matejka, S. Chambon – U. Limoges, R. Rozzelle, D. Kroening – Mecklenburg Co. Water Quality Program. **Graduate Advisors:** S.W. Chisholm – M.I.T.; K. Stolzenbach – UCLA; A.D. Koussis, Nat. Observatory of Athens, Greece; F. Parker – Vanderbilt U. **Ph.D/Masters Dissertation/Thesis Advisor :** (Ph.D) J. Hattaway, D. Kim, W. Saunders – UNC Charlotte; M. Leloup – U. Limoges; D. Mama – U. d'Abomey-Calavis; G. Das – Wentworth Inst. of Tech.; M. Borsuk – Dartmouth Coll.; (Masters) W. Shull, M. Knobsy – HDR, D. Chen – City of Decatur, GA.; S. Negusse – Texas Water Development Board, N. Madding, B. Duclaud, R. Guyer, T. Goforth, UNC Charlotte; J. Hieronymus, S. Wilkerson - Charlotte Storm Water Services; L. Sickles, B. Sinha, D. Bost – City of Charlotte, J. Keaton – ENTRIX; N. Hampton, G. Kimble, G. Brant – Charlotte Water; S. Manian – Black and Veatch; M. C. Williams, V. Nimmala – Dewberry.