NATALIE G. NELSON

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PROFESSIONAL APPOINTMENTS

Assistant Professor Aug 2017 – Present
North Carolina State University
Department of Biological & Agricultural Engineering
Raleigh, NC

NSF Graduate Research Fellow Aug 2012 – Aug 2017
University of Florida
Department of Agricultural and Biological Engineering
Gainesville, FL

Research Affiliate and NSF Graduate Research Intern Jun 2015 – Aug 2016
Smithsonian Environmental Research Center
Edgewater, MD

EDUCATION

PhD, Agricultural and Biological Engineering, University of Florida Aug 2017
Interdisciplinary concentration in Hydrologic Sciences
Dissertation: *Quantifying the spatiotemporal importance of fresh-brackish water quality drivers using aquatic data analytics and models*

BSc, Agricultural and Biological Engineering, University of Florida May 2012

PUBLICATIONS

Peer-reviewed:

NG Nelson, R Muñoz-Carpena, PJ Neale, M Tzortziou, JP Megonigal (2017), Temporal variability in the importance of hydrologic, biotic, and climatic descriptors of dissolved oxygen dynamics in a shallow tidal-marsh creek, *Water Resources Research*, 52. doi:10.1002/2016WR020196

NG Nelson, R Muñoz-Carpena, and EJ Phlips (2017), A novel quantile method reveals spatiotemporal shifts in phytoplankton descriptors between bloom and non-bloom conditions in a subtropical estuary, *Marine Ecology Progress Series,* 567:57-78. doi:10.3354/meps12054

In preparation for peer review:

NG Nelson, R Muñoz-Carpena, EJ Phlips, D Kaplan, P Sucsy, J Hendrickson, Variable sensitivities and nonlinear responses of cyanobacteria functional groups to nutrient levels and biophysical factors in a shallow subtropical lake, *in preparation for Environmental Science & Technology*

EJ Phlips, S Badylak, **NG Nelson**, M Lasi, et al., Temporal patterns and regime shifts in phytoplankton blooms: the case of the Indian River Lagoon, a restricted subtropical estuary, *in preparation for Limnology and Oceanography*

NG Nelson, R Muñoz-Carpena, EJ Phlips, P Sucsy, Important factors in freshwater eutrophication simulations identified through global sensitivity and uncertainty analysis of a 3D coupled hydrodynamic-biogoechemical model, *in preparation for Environmental Modelling & Software*

Technical reports (non-refereed):

NG Nelson, S Ward, and D Ward (2017), Implications of altered freshwater flows on estuarine fish and shellfish: a case study of the Lower Suwannee River. White paper prepared for the Florida Climate Institute, UF Levin College of Law, and UF/IFAS Nature Coast Biological Station.

R Muñoz-Carpena and **NG Nelson** (2017), Lake George Water Quality Modeling: EFDC and CE-QUAL-ICM Platform Compatibility and Evaluation of Sensitivity Analysis Methodologies. Report to the St. Johns River Water Management District, Palatka, FL. Contract # 28650.

ADDITIONAL PROFESSIONAL TRAINING

Sea level rise and coastal ecology: science, policy, and practice **2017**
University of Florida, Cedar Key, FL

Google Earth Engine User Summit **2016**
Google Headquarters, Mountain View, CA

Norman A. Borlaug Summer Institute on Global Food Security **2013**
Purdue University, West Lafayette, IN

SELECT NATIONAL & INTERNATIONAL AWARDS

Presidential Management Fellows Finalist **2017**
U.S. Office of Personnel Management

Outstanding Student Paper Award **2016**
American Geophysical Union, Hydrology Section

Outstanding Oral Presentation Award **2016**
Annual International Meeting of the American Society of Agricultural and Biological Engineers, Natural Resources & Environmental Systems Division

Outstanding Teaching Assistant Award **2015**
National Association of Geoscience Teachers

Graduate Research Internship **2015**
National Science Foundation

Campus RainWorks Challenge: 1st Place, Master Plan Category (team award) **2014**
Environmental Protection Agency

Campus RainWorks Challenge: 1st Place, Large Institution Category (team award) **2013**
Environmental Protection Agency

Graduate Research Fellowship **2012**
National Science Foundation