### DEVENDRA M AMATYA, PhD., P.E.

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#### a. Professional Preparation

Lumumba UniversityCivil Engineering.M.Sc., 1974Duke UniversityCivil EngineeringM.S., 1985North Carolina State UniversityBiological & Agricultural Engrg., Ph.D. 1993North Carolina State University,Post-Doc (Water Management)1994 - 1998

### b. Appointments

2002- Research Hydrologist, USDA Forest Service, Center for Forested Wetlands Research

1998-2002: Research Assistant Professor, North Carolina State University

1985-1988: Project Engineer, Department of Soil Conservation/Watershed Management, Nepal

1978-1983: Soil Conservation Officer/Engineer, Department of Soil Conservation/Watershed Management, Nepal

1975-1978: Project Engineer, Water Supply & Sewerage Corporation, Nepal

1974-1975: Assistant Engineer, Department of Electricity/Hydropower, Nepal

### c. Publications

### (i) Up to five publications most closely related to proposal project

- Amatya, D. M., & Harrison, C. A. (2016). Comparison of potential evapotranspiration (PET) using five methods for a grass reference and a natural forest in coastal plain of South Carolina. *J. Hydrol. Eng.*, published online on February 24, 2016; ASCE, ISSN 1084-0699, P 05016007-1 to -13.
- Panda, S., D.M. Amatya, G. Sun, and A. Bowman. 2016. Remote Estimation of a Managed Pine Forest Evapotranspiration with Geospatial Technology. Accepted, *Trans. Of the ASABE*.
- Panda, S., D.M. Amatya, and G. Hoogenboom. 2014. Stomatal Conductance, Canopy Temperature, and Leaf Area Index Estimation Using Remote Sensing and OBIA techniques. J. of Spatial Hydrology. Vol.12, No.1 Fall 2014, 1-24.
- Amatya, D.M., M.K. Jha, A.E. Edwards, T.M. Williams, and D.R. Hitchcock. 2011. SWAT-based Streamflow and Embayment Modeling of a Karst affected Chapel Branch Watershed, SC. *Trans. Of the ASABE*. 54(4):1311-1323.
- Amatya, D.M. and M.K. Jha. 2011. Evaluating SWAT Model for a Low Gradient Forested Watershed in Coastal South Carolina. *Trans of the ASABE*, 54(6):2151-2163.

# (ii) Up to five other significant publications

- Amatya, D.M., J. Campbell, P. Wohlgemuth, K. Elder, S. Sebestyen, et al. 2016. Hydrologic Processes of Reference Watersheds in Experimental Forests, U.S.A. In Ch. 14, Forest Hydrology: Processes, Management, and Assessment, Amatya et al. (Eds.), CABI Publishers, U.K., In press.
- Amatya, D.M., G. Sun, C. Rossi, H. Ssegane, and S. Panda. 2015. Forests, Land Use and Water. In: Chapter 7, "Impact of Climate Change on Water Resources in Agriculture", Cornelio Alberto Zolin, Renato de A. R. Rodrigues eds.), 232 Pages Science Publishers, CRC Press, USA.
- Amatya, D.M., C. G. Rossi, Z. Dai, R. Williams, A. Saleh, M.A. Youssef, G.M. Chescheir, R.W. Skaggs, C.C. Trettin, E. Vance, and J.E. Nettles. 2013. Modeling the Fate of Nitrogen applied to Forest Ecosystems An Assessment of Model Capabilities and Potential Applications. *Trans. of the ASABE*, 56(5):1731-1757.
- Amatya, D.M., C. Trettin, S. Panda, and H. Ssegane. 2013. Application of LiDAR data for Hydrologic Assessments of Low-gradient Coastal Watershed Drainage Characteristics. *J of Geographical Information System*, 2013, 5, 171-195. Doi:10.4236/jgis.2013.52017 Published online April 2013.
- Dai, Z., D. Amatya, G. Sun, C. Trettin, C. Li, and H. Li. 2011. Climate variability and its impact on forest hydrology on South Carolina Coastal Plain of USA. *Atmosphere* 2011, 2, 330-357; doi:10.3390/atmos2030330.

#### d. Synergistic Activities

- Leading a project on "Modeling Watershed-scale Reference and Actual Evapotranspiration Estimates for Pine Forest Stands and Its Intercropping with Switchgrass using Satellite Imagery Approaches" funded by US Department of Energy through North Carolina State University, Raleigh, North Carolina, USA.
- U.S. Fulbright Fellow, Agric. University of Krakow and Warsaw University of Life Sciences, 2010-2011 Panel Member, ABT/U.S. EPA's Model Evaluation Committee for the New York's Cayuga Lake Phosphorus Total Maximum Load Development: 2014-2017, USA.

Invited technical Proposal reviewer, Organization for Scientific Research, The Netherlands, January 2014 Co-Chair, Int'l Symposium on "Evapotranspiration: Challenges in Monitoring and Modeling..", 2014, Raleigh, NC, U.S.A. and Int'l Symposium on "Hydrology and Management of Forested Wetlands", 2006, New Bern, NC, U.S.A.- American Society of Agricultural and Biological Engineers (ASABE).

Chair, ASABE SW23 Drainage Committee, 2011-12., Now Secretary, NREM21 Hydrology Committee. Associate Editor, *Transactions of the ASABE* 2007 – till date, and Guest Editor, ET Special Collection of the *Transactions of the ASABE*, 2014-2015; Associate Editor, *Journal of South Carolina Water Resources* Invited Scientific Board member, *Formatio Circumiectus* (Environmental Processes), Poland, 2011-

### e. Collaborators & Other Affiliations

#### (i)Collaborators

- C. Trettin, Center for Forested Wetlands Research, USDA Forest Service, USA
- G. Sun, Eastern Forest Environmental Threat Assessment Center, USDA Forest Service, USA
- T. Appelboom, F. Birgand, G. Chescheir, R. Skaggs, and M. Youssef, Biological and Agricultural Engineering Department, North Carolina State University, USA.
- J. Nettles, Southern Environmental Research program, Weyerhaeuser Company, USA
- D. Hitchcock, A. Jayakaran, and T. Williams, Baruch Institute of coastal Ecology and Forest Science, Clemson University, U.S.A.
- T. Callahan, Master in Environmental Studies Program, College of Charleston, SC, USA
- D. Bosch, Southeast Agricultural Research laboratory, USDA-ARS, GA, USA
- H. Ssegane, Energy Systems Division, Argonne National Laboratory, IL, USA
- A. Muwamba, College of Engineering, University of Georgia, GA, USA
- S. Panda, Institute of Geospatial Analysis, University of North Georgia, GA, USA
- W. Tollner, College of Engineering, University of Georgia, GA, USA
- R. Jackson, School of Forest Resources, University of Georgia, GA, USA
- C. Green, Bureau of Land Management, US Department of Interior, UT, USA.
- M. Jha, Department of Civil & Environmental Engineering, North Carolina A&T University, USA
- A. Bitner and Radecki-Pawlik, and Department of Surveying and Hydraulic Engineering, respectively, Agricultural University of Krakow, Poland
- D. M-Swiatek, Department of Environmental Engineering, Warsaw University of Life Sciences, Poland
- H. Kim, Department of Environmental Energy Engineering, Anyang University, South Korea
- M. Borin, Department of Environmental Engineering, University of Padova, Italy
- U. Hirt, Leibniz Institute of Freshwater Ecology, Department of Rivers and Shallow Lakes, Germany
- C. de Jong, Mountain Center, University of Savoy, France
- L. Bren, University of Melbourne, Australia

### (ii) Graduate and Postdoctoral Advisors

Graduate Advisors: Dr. Wayne Skaggs, WNR and Distinguished University Professor, Biological and Agricultural Engineering Department, and Dr. James D Gregory, Professor Emeritus, Department of Natural Resources, both at North Carolina State University, USA.

Postdoctoral Advisor: Dr. Wayne Skaggs, North Carolina State University, USA

### (iii) Thesis Advisor and Postgraduate Sponsor

Thesis/Dissertation Advisor/Mentor:

- J. Jurek and L. Paugh Both M.S. students, North Carolina State University, Raleigh, NC, USA
- D. Sharpe, PhD student, North Carolina State University, Raleigh, NC, USA
- H. Kim, PhD student, North Carolina State University, Raleigh, NC, USA
- J. Amoah, PhD student, Florida A&M University, Tallahassee, FL, USA
- A. Morrison, B. Beltran, E. Haley, S. Harder, I. La Torre Torres MS students, College of Charleston, Charleston, SC, USA
- T. Bisol, PhD student, University of Padova, Padova, Italy

Total number of graduate students: 11

## Postdoctoral Sponsor:

- A. Muwamba Postdoctoral Scientist through University of Georgia, USA: 2013 till date
- H. Ssegane Postdoctoral Scientist through University of Georgia, USA: 2011 2013

Total number of Postdoctoral scientists: 2