SUMMARY CURRICULUM VITAE 2007

Stephen P. Opsahl, Ph.D.
Associate Scientist

Dr. Opsahl has engaged in research in a diversity of aquatic systems including streams, springs, wetlands, aquifers, and marine environments. The general questions which are implicit in all of Dr. Opsahl's work are: 1) how do subsidies from the terrestrial environment support biological productivity, aquatic food webs, and biogeochemical cycling of key elements including carbon, nitrogen and phosphorous; and 2) how are natural and human-induced changes affecting ecosystem processes and how does this feed back into society? In Georgia, the effects of human activities are manifesting themselves in many ways including climate change, changing water availability, and degradation of water quality. Dr. Opsahl's goal is to work at the interface of leading-edge science and a developing society, which is a fragile but critical linkage to maintain if environmental and human health are to persist.

Education:

PhD, Marine Science, University of Texas at Austin, 1995
BA, Microbiology, University of Texas at Austin, 1987

Professional Experience:

2007: Adjunct Assistant Professor, University of Georgia, Institute of Ecology

2005-present: Courtesy Assistant Professor, University of Florida, Soil and Water Science

2001-present: Courtesy Assistant Scholar, Florida State University, Oceanography

2000-present: Assistant Scientist, Jones Ecological Research Center

1998- 2000: National Research Council Research Associate/U.S. EPA

1995-1998: Post-Doctoral Associate, University of Texas at Austin

Professional Affiliations:

American Society of Limnology and Oceanography
American Geophysical Union

Recent Research Publications: (Past 5 years)

Opsahl SP, SE Chapal, DW Hicks and CK Wheeler. 2007. Evaluation of ground-water and surface-water exchanges using streamflow difference analyses. Journal of the American Water Resources Association 43:1132-1141.

Happell JD, SP Opsahl, Z Top and JP Chanton. 2006. Apparent CFC and $^{3}H/^{3}He$ age differences in water from Floridan Aquifer springs. Journal of Hydrology 319:410-426.

Opsahl SP and JP Chanton. 2006. Isotopic evidence for methane-based chemosynthesis in the Upper Floridan aquifer food web. Oecologia 150:89-96.

Peeler KA, SP Opsahl and JP Chanton. 2006. Tracking anthropogenic inputs using caffeine, indicator bacteria, and nutrients in rural freshwater and urban marine systems. Environmental Science & Technology 40:7616-7622.

Opsahl SP 2005. Organic carbon composition and oxygen metabolism across a gradient of seasonally inundated limesink and riparian wetlands in the southeast Coastal Plain, USA. Biogeochemistry 76:47-68.

Purvis K and SP Opsahl. 2005. A novel technique for invertebrate trapping in groundwater wells identifies new populations of the troglobitic crayfish, *Cambarus cryptodytes*, in southwest Georgia, USA. Journal of Freshwater Ecology 20:361-365.

Miller W, MA Moran, WM Sheldon, RG Zepp and S Opsahl. 2002. Determination of apparent quantum yield spectra for the formation of biologically labile photoproducts. Limnology and Oceanography 47:343-352.

Kisselle K, RG Zepp, RA Burke, A Pinto, SP Opsahl, M Bustamante, RF Varella and LT Viana. 2002. Seasonal soil fluxes of carbon monoxide in burned and unburned Brazilian savannas. Journal of Geophysical Research 107(D20), 8051, doi:10.1029/2001JD000638.

Opsahl SP and RG Zepp. 2001. Photochemically-induced alteration of stable carbon isotope ratios ($\delta^{13}C$) in terrigenous dissolved organic carbon. Geophysical Research Letters 28:2417-2420.

Outreach Publications and Reports to Natural Resource Agencies: (Past 5 years)

Muenz TK, SP Opsahl and SW Golladay. 2007. Current conditions of historical mussel habitat in the Flint River Basin, Georgia. Pages 475-478 in T.C. Rasmussen, G.D. Carroll and A. Georgakakos (eds.). Proceedings of the 2007 Georgia Water Resources Conference, Institute of Ecology, University of Georgia, Athens, GA.

Opsahl SP, JD Happell and JP Chanton. 2007. Unusual chemistry and anthropogenic contaminants in Upper Floridan aquifer groundwater underneath the Chickasawhatchee Swamp. Pages 483-486 in T.C. Rasmussen, G.D. Carroll and A. Georgakakos (eds.). Proceedings of the 2007 Georgia Water Conference, Institute of Ecology, University of Georgia, Athens, GA.

Sims S and SP Opsahl. 2007. Long-term trends in nitrate contamination in four Flint River Springs. In: T.C. Rasmussen, G.D. Carroll and A. Georgakakos (eds.). Proceedings of the 2007 Georgia Water Resources Conference, Institute of Ecology, University of Georgia, Athens, GA.

Muenz T, SP Opsahl, SW Golladay, DW Hicks, B Clayton and K Cressman. 2006. Assessment of Stream Habitat in the Flint River Basin. Final Report submitted the U. S. Department of the Interior, Fish and Wildlife Service.

Opsahl SP, SE Chapal and K Wheeler. 2005. Using stream gage data to quantify surface water/groundwater exchanges between the Upper Floridan aquifer and the lower Flint River, Georgia USA, 1989-2004. Pages 764-768 in K.J. Hatcher (ed.). Proceedings of the 2005 Georgia Water Resources Conference, Institute of Ecology, University of Georgia, Athens, GA.

Jenkins JC, DW Hicks and SP Opsahl. 2003. Nitrogen chemistry in the Upper Floridan aquifer in wells on the Ichauway Ecological Reserve, Newton, Georgia. Pages 852-855 in K.J. Hatcher (ed.). Proceedings of the 2003 Georgia Water Resources Conference, Institute of Ecology, University of Georgia, Athens, GA.

Opsahl SP, K Wheeler, RL Lane and JC Jenkins. 2003. Effects of the Upper Floridan aquifer on water chemistry and oxygen metabolism in the lower Flint River during drought. Pages 614-618 in K.J. Hatcher (ed.). Proceedings of the 2003 Georgia Water Resources Conference, Institute of Ecology, University of Georgia, Athens, GA.

Wheeler K and SP Opsahl. 2003. Hydrologic controls on water chemistry and microbial activity in a small coastal plain stream. Pages 610-613 in K.J. Hatcher (ed.). Proceedings of the 2003 Georgia Water Resources Conference, Institute of Ecology, University of Georgia, Athens, GA.

Current Jones Center Research:

Golladay SW, SP Opsahl, LL Smith and DW Hicks. 2005. Hydrologic Variation and Human Development in the Lower Flint River Basin: An Ongoing Landscape-scale Experiment.

Kirkman LK, LL Smith, SW Golladay, SP Opsahl and DW Hicks. 2005. Depressional wetlands in the Coastal Plain landscape: Maintenance of regional biological diversity.

Grants and Contracts: (Past 5 years)

Opsahl SP, SW Golladay and DW Hicks. 2004. Assessment of stream habitat in the ACF basin. US Fish and Wildlife Service. Budget $19,000, October 1, 2004 – December 31, 2005.

Hicks DW, SW Golladay and SP Opsahl. 2002. Evaluation of groundwater and surface-water exchanges in the lower Flint River Basin. Georgia Environmental Protection Division. Budget $96,674 June 1, 2002 – June 30, 2003.

Recent Student Advisement:

Julie McEntire, Current, Odum School of Ecology, University of Georgia, Athens, Georgia.

Carla Atkinson. Current. Odum School of Ecology, University of Georgia, Athens, Georgia.

Kelly Peeler. MS 2004. Florida State University Department of Oceanography. Caffeine as an anthropogenic source indicator in freshwater and marine systems.