

ANDREW J. GUSWA

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Associate Professor, Picker Engineering Program
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Education

Ph.D., Stanford University, 2000

M.S.C.E., Stanford University, 1995

B.S.E., Princeton University, 1994

Courses Taught

Fluid Mechanics

Mass and Heat Transfer

Ecohydrology

Hydrosystems Engineering

Design Clinic

In 2001, Drew Guswa joined the faculty at Smith College to help launch the Picker Engineering Program – the first engineering program at an all-women’s college. In 2009, he was named as the Director of Smith’s new Center for the Environment, Ecological Design, and Sustainability. In this capacity, Drew is working to provide students with opportunities to integrate knowledge across disciplines in support of environmental decisions and action. As a civil and environmental engineer, he views his own research as a chance to make manifest his commitment to the environment through continually acquiring engineering and analytical skills and applying them to new challenges. He is particularly interested in the interactions between one’s predictive goals and the mathematical representation of physical processes. Recently, Drew was named as the Senior Hydrology Advisor to the Natural Capital Project - a joint venture of The Nature Conservancy, Stanford University, the University of Minnesota, and the World Wildlife Fund to quantify the value of ecosystem services. Drew and his family enjoy biking, cross-country skiing, hiking, and other outdoor activities.



Selected Recent Publications

Guswa, Andrew J. and C. M. Spence ‘11, 2011. Effect of throughfall variability on recharge: Application to hemlock and deciduous forests in western Massachusetts, *Ecohydrology*.

Gerecht ‘10, K. E., M. B. Cardenas, A. J. Guswa, J. D. Nowinski, A. H. Sawyer, and T. E. Swanson, 2011. Enhanced hyporheic flow and heat transport across a bed-to-bank continuum in a large regulated river, *Water Resources Research*, doi: 10.1029/2010WR009794.

Guswa, Andrew J., 2010. Effect of plant-uptake strategy on the water-optimal root depth, *Water Resources Research*, 46, W09601, doi:10.1029/2010WR009122.

Guswa, Andrew J., 2008. The influence of climate on root depth: A carbon cost-benefit analysis, *Water Resources Research*, 44, W02427, doi:10.1029/2007WR006384.

Guswa, Andrew J., A. L. Rhodes, and S. E. Newell ‘04, 2007. Importance of orographic precipitation to the water resources of Monteverde, Costa Rica, *Advances in Water Resources*, 30, 2098-2112.