

PROMOTION RECOMMENDATION
The University of Michigan
School of Natural Resources and Environment

William S. Currie, associate professor of natural resources and environment, with tenure, School of Natural Resources and Environment, is recommended for promotion to professor of natural resources and environment, with tenure, School of Natural Resources and Environment.

Academic Degrees:

Ph.D.	1995	University of New Hampshire, Natural Resources, Durham, NH
M.S.	1992	University of Virginia, Environmental Sciences, Charlottesville, VA
B.S.	1983	Brown University, <i>magna cum laude</i> , Physics, Providence, RI

Professional Record:

2006 – present	Associate Professor, School of Natural Resources and Environment, University of Michigan
2010 – 2012	Associate Dean for Academic Affairs, School of Natural Resources and Environment, University of Michigan
2003 – 2005	Assistant Professor, School of Natural Resources and Environment, University of Michigan
1997 – 2003	Assistant Professor, University of Maryland
1995 – 1997	Visiting Post-doctoral Scholar, The Ecosystems Center, Marine Biological Laboratory, Woods Hole, MA
1984-1986	Senior Scientist II, Booz, Allen & Hamilton, Applied Sciences Center, Bethesda, MD
1983-1984	Systems Engineer, Rockwell International, Space Shuttle Orbiter Division, Downey, CA

Summary of Evaluation:

Teaching: Professor Currie is a productive educator whose wide array of courses demonstrates both his versatility in subject matter and his willingness to lead critical courses in the School of Natural Resources and Environment (SNRE) and in the Program in the Environment (PitE), the undergraduate program that SNRE jointly manages with the College of Literature, Science, and the Arts. He has worked diligently with the Center for Research on Learning and Teaching to refine his teaching skills and develop active-learning classes. In addition to large enrollment courses in both SNRE and PitE, he has also designed a number of well-received specialized seminars in response to student interest.

Professor Currie's mentoring extends well beyond the classroom, and encompasses undergraduates, graduates, post-doctoral fellows, and K-12 students. He chairs or has chaired three Ph.D. committees and is currently serving on 17 more; he also supervises a number of master's theses, projects, and practica. He is also a regular advisor to Undergraduate Research Opportunity Program (UROP) students. For five years, Professor Currie also taught math to high school students, originally as part of a grant from the National Science Foundation. Further, he was instrumental in developing the innovative SNRE Envoys Diversity Initiative, funded through Rackham to enhance diversity in the student population.

Research: Professor Currie is a highly collaborative ecologist and biogeochemist who develops ecosystem models to understand the processes and dynamics of nutrient cycling in terrestrial ecosystems. His contributions to the field have been widely recognized by his peers. In particular, Professor Currie developed two fundamental ecosystem models, TRACE and MONDRIAN. These models integrated information and analyses that resulted in enhanced interdisciplinary collaboration both nationally and internationally. TRACE models forest ecosystem carbon and nitrogen cycling; MONDRIAN is a process-based model that integrates ecosystem processes with community-population processes. This work has helped make Professor Currie a highly sought after collaborator.

Professor Currie is a productive scholar with 24 papers published or in press since his last promotion, many in the top journals in his field. These publications, like his models, integrate data from different levels of analysis (e.g., time scales, biome, nutrient cycling), and increase linkages for scholars in each of the fields. Notably, 14 are co-authored with post-doctoral fellows and/or graduate students. He received substantial research funding as part of two major federal grants, both highly interdisciplinary; one from NASA's Interdisciplinary Research in Earth Science Program and one from NSF's Coupled Natural-Human Systems Program.

Recent and Significant Publications:

- Brunner, Anna, William S. Currie, and Shelie Miller, 2015, "Cellulosic ethanol production: Landscape scale net carbon strongly affected by forest decision making," *Biomass and Bioenergy* 83:32-41.
- Currie, William S., Deborah E. Goldberg, Jason Martina, Radka Wildova, Emily Farrer, and Kenneth Elgersma, 2014, "Emergence of nutrient-cycling feedbacks related to plant size and invasion success in a wetland community-ecosystem model," *Ecological Modelling* 282: 69-82.
- Whittinghill, Kyle A., William S. Currie, Donald R. Zak, Andrew J. Burton and Kurt S. Pregitzer, 2012, "Anthropogenic N deposition increases soil C storage by decreasing the extent of litter decay: analysis of field observations with an ecosystem model," *Ecosystems* 15(3): 450-461.
- Currie, William S., 2011, "Units of nature or processes across scales? The ecosystem concept at age 75," (Invited Tansley Review), *New Phytologist* 190:21-34.
- Currie, William S., Harmon, M.E., Burke, I.C., Hart, S.C., Parton, W.J., and Silver, W.L., 2010, "Cross-biome transplants of plant litter show decomposition models extend to a broader climatic range but lose predictability at the decadal time scale," *Global Change Biology* 16: 1744-1761.

Service: Professor Currie's level of service has been extraordinary. For two years, he served as SNRE's associate dean for academic affairs, an unusually time-intensive commitment for an associate professor. In addition, he was coordinator of the master's core course and its labs, implemented the innovative Envoys program to enhance outreach to underrepresented communities, and served on several promotion select committees and search committees. Externally, he is a subject matter editor for *Ecological Applications*, and reviews articles for nine other journals. He has also been active in organizing symposia and workshops, served on grant review panels for the National Science Foundation, and has six times been chosen to serve on the prestigious EPA STAR program review team.

External Reviewers:

Reviewer A: "In terms of research accomplishment he ranks with the top ecosystem scientists at major Universities at his level of seniority."

Reviewer B: "... Dr. Currie has co-authored papers with community ecologists that are breaking new ground through their explorations of the interface between population and community processes and ecosystem dynamics."

Reviewer C: "William Currie is clearly a nationally and internationally recognized leader in the areas of Ecosystem and Urban ecology with sustained production of high quality scientific products on an impressively wide range of topics."

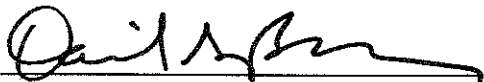
Reviewer D: "I consider [Professor Currie] one of the brightest minds in Ecology and his contributions to ecosystem modeling are influential and very high quality; he maybe has a handful of peers in the field at his level of excellence."

Reviewer E: "[Professor Currie is] potentially on the intellectual track of a Hank Shugart, Don DeAngelis or Bob O'Neill, incredibly talented modelers who not only knew how to build models but also how to think creatively, broadly and conceptually."

Reviewer F: "[Professor Currie's] record is very, very good on all fronts. He is publishing a lot, in all the right journals, with all the right people as coauthors."

Reviewer G: "Dr[.] Currie has demonstrated his scientific excellence and productivity over his tenure."

Summary of Recommendation: Professor Currie is an innovative scholar whose reputation for excellence places him among the leaders in his field. He publishes in top journals and is highly sought after as a collaborator and thought leader. He is a talented teacher who constantly strives to improve his students' experience. His service to the university and his field is extraordinary. It is with the support of the Executive Committee of the School of Natural Resources and Environment that I recommend William S. Currie for promotion to professor of natural resources and environment, with tenure, School of Natural Resources and Environment.



Daniel G. Brown
Professor and Interim Dean
School of Natural Resources and Environment

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