

TIMOTHY L. CARTER

Curriculum Vitae

110 Riverbend Rd. 706.542.6821
River Basin Center tlcarter@gmail.com
Odum School of Ecology http://tlclimb.myweb.uga.edu
University of Georgia
Athens, GA 30602 USA

EDUCATION

University of Georgia, Ph.D. in Ecology with distinction (Aug 2006)

Dissertation: Vegetated Roofs for Urban Ecosystem Remediation: Performance and Policy in the Tanyard Branch Watershed

University of Georgia, Graduate Certificate in Conservation Ecology and Sustainable Development (June 2004)

University of Tennessee, Knoxville, B.S. in Ecology and Evolutionary Biology (Dec 2000)

RESEARCH INTERESTS

Urban ecology
Sustainable development
Natural resource conservation
Environmental policy
Watershed and stormwater management

PROFESSIONAL EXPERIENCE

Aug 2007 – present

Public Service Assistant Faculty / Urban Ecologist

River Basin Center / Odum School of Ecology / University of Georgia

Projects: low-impact development analysis; sea level rise visualization; green developer certification; conservation subdivision policies; energetics for sustainability; teaching

Aug 2006 – July 2007

Postdoctoral Research Assistant

River Basin Center / Odum School of Ecology / University of Georgia

Projects: Etowah Aquatic Habitat Conservation Plan research, outreach and training; coastal stormwater management; environmental accounting; teaching

Summer 2004 and Fall 2006

Adjunct Faculty

Gainesville State College

Taught courses and labs in introductory ecology and environmental science

Aug 2002 – July 2006

Research Assistant

Odum School of Ecology, University of Georgia

Projects: site manager for campus green roof experiment; Etowah Habitat Conservation Plan technical assistance; southeastern water use policy; agricultural best management practices

TIMOTHY CARTER

COURSES TAUGHT

Urban Ecology (15 students)

University of Georgia, Fall 2007, Fall 2008

Ecological Basis of Environmental Issues (300 students)

University of Georgia, Spring 2007

Introduction to Ecology / Laboratory (24 students)

Gainesville State College, Fall 2006

Environmental Law for Scientists and Design Professionals (8 students)

Co-instructor, University of Georgia, Spring 2005

Introduction to Environmental Science / Laboratory (25 students)

Gainesville State College, Summer 2004

INVITED LECTURES

Conservation Biology

Berry College, Spring 2008

Ecological Design

Clemson University, Spring 2008

Conservation Ecology

University of Georgia, Fall 2007, Fall 2008

Sustainability Studio

University of Georgia, Fall 2007

PEER-REVIEWED PUBLICATIONS

Schramski, J., D. Tilley, **T.L. Carter**, N. Rustagi. In review. "Data collection, assumptions, and synthesis for comparative embodied energy analysis for green engineering." Proceedings of the 5th Biennial Energy Research Conference. Gainesville, FL.

Carter, T.L. In review. "Developing conservation subdivisions in Georgia: ecological constraints, regulatory barriers and market incentives." *Landscape and Urban Planning*.

Carter, T.L. and C. Butler. In press. "Ecological impacts of replacing traditional roofs with green roofs in two urban areas." *Cities and the Environment*.

Carter, T.L. and L. Fowler. 2008. "Establishing green roof infrastructure through environmental policy instruments." *Environmental Management* 42: 151-164.

Wenger, S.J., **T.L. Carter**, R.A. Vick, L. Fowler. 2008. "Runoff Limits: an ecologically-based stormwater management program." *Stormwater* 9: 1-10.

Carter, T.L. and A. Keeler. 2008. "Life cycle cost benefit analysis of extensive vegetated roof systems." *Journal of Environmental Management* 87: 350-363.

Carter, T.L. and C.R. Jackson. 2007. "Vegetated roofs for stormwater management at multiple spatial scales." *Landscape and Urban Planning* 80: 84-94.

Carter, T.L., T. Rasmussen, C.R. Jackson, A. Keeler, L. Fowler, J.L. Meyer, and D. Gattie. 2007. "Vegetated roofs: performance and policy in Athens, GA" In T. Rasmussen, G. Carroll, and A. Georgakakos (Eds). Proceedings of the 2007 Georgia Water Resources Conference, University of Georgia, Athens, GA.

TIMOTHY CARTER

- Carter, T.L.** and T.C. Rasmussen. 2006. "Hydrologic behavior of vegetated roofs." *Journal of the American Water Resources Association* 42:1261-1274.
- Carter, T.L.**, and T.C. Rasmussen. 2005. "Use of green roofs for ultra-urban stream restoration in the Georgia piedmont (USA)." In: *Proceedings of 3rd North American Green Roof Conference: Greening Rooftops for Sustainable Communities*, Washington D.C. The Cardinal Group, Toronto.
- Carter, T.L.**, and T.C. Rasmussen. 2005. "Vegetated roofs as a stormwater best management practice in an ultra-urban watershed." In K.J. Hatcher (ed). *Proceedings of the 2005 Georgia Water Resources Conference*, University of Georgia, Athens, GA.
- Wenger, S.J., M.C. Freeman, **T.L. Carter**, and L.A. Fowler. 2005. "Using impervious surface limits to protect imperiled fish species." In K.J. Hatcher (ed). *Proceedings of the 2005 Georgia Water Resources Conference*, University of Georgia, Athens, GA.

OTHER PUBLICATIONS

- Seymour, R., **T.L. Carter**, S.J. Wenger, and D. Stewart. In press. "Infiltration best management practices for stormwater for the Etowah Habitat Conservation Plan." *Proceedings of the 2nd National Low Impact Development Conference*. Wilmington, N.C.
- Carter, T.L.** 2008. "Encouraging conservation subdivisions in Georgia through understanding market barriers and opportunities." River Basin Center, University of Georgia. <http://www.rivercenter.uga.edu>.
- Carter, T.L.** 2008. "Stormwater utility handbook: a step-by-step guide to establishing a utility in Coastal Georgia." River Basin Center, University of Georgia. <http://www.rivercenter.uga.edu/>.
- Carter, T.L.**, J. Roskie, and M. Novotney. 2008. "Model Post-Construction Stormwater Management Ordinance for the Coastal Nonpoint Source Management Area." *Georgia Coastal Stormwater Supplement*. <http://mpcnaturalresources.org/>.
- Carter, T.L.**, R.M. Seymour, S.J. Wenger. 2006. "Runoff Limits Manual." Etowah Habitat Conservation Plan. <http://etowahhcp.org/runoff>.
- Carter, T.L.** 2004. "Erosion and sedimentation technical committee report." Etowah Habitat Conservation Plan. <http://etowahhcp.org/documents/eandsfinalreport.pdf>.
- Carter, T.L.** 2003. "Stormwater utilities: a primer." River Basin Center, University of Georgia. http://www.rivercenter.uga.edu/education/law/documents/stormwater_web.pdf.

RESEARCH GRANTS

- Coastal Incentive Grant** – PI. Georgia Coastal Resources Division. Oct 2008 – Sept 2011. \$487,478. *Planning for sea level rise in coastal Georgia with visualization, mitigation, and outreach.*
- Habitat Conservation Planning Assistance Grant** – 1 of 8 co-PIs. US Fish and Wildlife Service. July 2008 – June 2009. \$491,232. *Development of a Habitat Conservation Plan for imperiled aquatic species of the Etowah River Basin: funding for transition to implementation.*
- World Wildlife Fund Contract** – 1 of 2 co-PIs. June 2008 – May 2009. \$38,000. *Water balance: A freshwater conservation initiative in the Etowah River Basin.*
- Clean Water Act Section 319(h) Grant** – PI. Georgia Environmental Protection Division. Jan 2008 – Dec 2008. \$61,619. *A paired watershed approach to evaluate low-impact development impacts on sensitive aquatic ecosystems.*

TIMOTHY CARTER

Center for Watershed Protection Contract – PI. Sept 2007 – June 2008. \$16,400. *Coastal Georgia model stormwater ordinance and stormwater utility handbook.*

Coastal Incentive Grant – 1 of 2 co-PIs. Georgia Coastal Resources Division. Sept 2007 – Aug 2008. \$130,432. *Coastal Georgia green certification program: Phase I – conservation subdivisions.*

Georgia Forestry Commission Urban and Community Forestry Grant. Sept 2003 – Aug 2004. \$40,000. *Green roofs for ecological restoration: a preliminary spatial analysis.*

FELLOWSHIPS / SCHOLARSHIPS

Kathryn Fuller Science for Nature Fellowship, World Wildlife Fund. April 2008. *1 of 10 finalists.*

Georgia Association of Water Professionals, Phillip R. Karr, III Scholarship. July 2006. \$1500

Doctoral Dissertation Fellowship, University of Georgia. Aug 2005 – June 2006. \$20,000

Georgia Air and Waste Management Association, Environmental Scholarship. Oct 2004. \$1500

National Wildlife Federation, Campus Ecology Fellowship. Feb 2004 – Dec 2004. \$1200

ORAL PRESENTATIONS

2008. “Targeting landscape features for urban stream policy.” 2nd Symposium on Urbanization and Stream Ecology. Salt Lake City, UT.

2008. “Application of green infrastructure at multiple spatial scales.” Georgia Association of Water Professionals. Stormwater and Watershed Specialty Conference. Atlanta, GA. *Invited speaker.*

2008. “Structural and regulatory tools for multifunctional urban landscapes.” US-IALE 23rd Annual Landscape Ecology Symposium. Madison, WI.

2008. “Green roofs and amber darters: creating multifunctional urban landscapes in Georgia.” CUERE Spring Seminar Series. University of Maryland, Baltimore County. *Invited speaker.*

2007. “Multifunctional urban surfaces: a green roof case study combining science and policy.” Ecological Landscaping Conference. Cleveland, OH.

2007. “Etowah Habitat Conservation Plan.” Georgia Association of Natural Resource Extension Professionals Annual Conference. Dahlonega, GA. *Invited speaker.*

2007. “Evaluating real-time urbanization impacts on aquatic ecosystems.” Coweeta LTER Summer Science meeting. Otto, NC. *Invited speaker.*

2007. “Etowah HCP and the Runoff Limits Program.” Runoff Limits Manual Technical Training. Roswell, GA.

2007. “Using green roofs to merge science and policy in Athens, GA” 2nd National Low Impact Development Conference. Wilmington, NC.

2007. “8 Tools of Watershed Protection.” Georgia River Network Annual Conference. Milledgeville, GA.

2006. “Introduction to the Etowah Habitat Conservation Plan”. Etowah HCP Stormwater Design Workshop. Canton, GA.

2006. “Green Roofs 101”. Watershed Academy: Principles of Water Quality Monitoring, Planning and Restoration. Athens, GA. *Invited speaker.*

TIMOTHY CARTER

2005. "Altering urban hydrology with widespread green roof coverage." Joint Southeastern Stormwater Management & Erosion and Sediment Control Conference. Peachtree City, Georgia.

2005. "Use of green roofs for ultra-urban stream restoration in the Georgia piedmont (USA)." Greening Rooftops for Sustainable Communities Conference. Washington D.C.

2005. "Vegetated roofs as a stormwater best management practice in an ultra-urban watershed." Georgia Water Resources Conference. Athens, GA.

2005. "Vegetated roofs as a stormwater best management practice in an ultra-urban watershed." University of Georgia's Institute of Ecology Graduate Student Symposium. Athens, GA.

2003. "Green roofs: tools for development." University of Georgia's Institute of Ecology Graduate Student Symposium. Athens, GA.

WORKSHOPS ORGANIZED

2008. "Land use and low-impact development." Savannah, GA. Session organized as part of the 3rd annual Georgia Environmental Conference. Included 3 invited speakers and over 30 participants.

2007 & 2008. "Runoff Limits Manual Technical Training". Roswell, GA. Included 4 invited speakers and over 35 participants.

2007. "Tools of Watershed Protection". Milledgeville, GA. Included 8 invited speakers and over 40 participants.

2006. "Etowah HCP Stormwater Design". Canton, GA. Included 4 invited speakers and over 80 participants.

SERVICE

Outreach and Community Service

2008. Program speaker, Street Smarts University Lunch and Learn. Atlanta, GA.

2007. Athens Dust Bowl Benefit concert, steering committee member.

2004 – 2007. Athens Area Habitat for Humanity, Board Member.

2004. Program speaker, Georgia Urban Forest Council 1st Quarterly Meeting. Athens, GA.

2004. Program speaker, Cool Communities 1st Quarterly Meeting. Atlanta, GA.

2003 – 2004. Habitat for Humanity SED House project, Chairman of the Building Materials Committee.

Academic Service

2008 – present. *Water Resources Faculty*, University of Georgia.

2007 – present. *Systems and Engineering Ecology Research Group*, University of Georgia.

2006 – present. *Green Building Advisory Committee*, Odum School of Ecology, University of Georgia.

2003 – 2004. *UGA SEEDS* (graduate student organization), Ecology student representative.

Professional Service

Invited reviewer for the following journals: *Ecological Engineering*, *Landscape and Urban Planning*, *Journal of Green Building*, *Journal of Environmental Management*, *Journal of Environmental Engineering*

TIMOTHY CARTER

Scientific Technical Advisory Committee, Georgia Coastal Comprehensive Plan. Georgia Department of Community Affairs. Jan 2007 – present.

Coastal Uplands Stakeholder Committee, Georgia Coastal Resources Division. May 2006 – Oct 2006.

Student Editor, Greenroofs.com. Aug 2003 – Aug 2004.

PROFESSIONAL AFFILIATIONS

US Regional Association of the International Association for Landscape Ecology

Ecological Society of America

REFERENCES

Laurie Fowler, L.L.M.
Co-director, River Basin Center
Doctoral advisor
Odum School of Ecology
University of Georgia
Athens, GA 30602
706.202.9949
lfowler@uga.edu

Dr. C. Ronald Carroll
Co-director, River Basin Center
Odum School of Ecology
University of Georgia
Athens, GA 30602
706.542.7615
rcarroll@uga.edu

Dr. C. Rhett Jackson
Associate Professor of Hydrology
Warnell School of Forestry and Natural Resources
University of Georgia
Athens, GA 30602
706.542.1772
rjackson@forestry.uga.edu