

ROBIN JOHN MCDOWELL, PH.D., P.G.

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EDUCATION

Ph.D. in Geological Sciences, University of Kentucky, 1992
M.S. in Geology, West Virginia University, 1988
B.S. in Geoscience, The Pennsylvania State University, 1983

TEACHING EXPERIENCE

August 2015 – present: Perimeter College of Georgia State University, Atlanta, GA
Lecturer, Assistant Professor. Currently teaching lecture and lab sections of Physical Geology, Historical Geology, and Environmental Science. Developed new activities for Physical Geology labs, including procuring a high-quality petrographic microscope and analog groundwater model. Each semester, develop and lead optional field trips for geology and environmental science classes. Able to bring extensive professional experiences into the Environmental Science classrooms, and have motivated a number of students to pursue careers in environmental science or geology.

2009 - 2015: University of Georgia, Odum School of Ecology, Athens, GA
Instructor. Environmental Policy. Graduate students learned how environmental policy is made, the role of scientists in influencing policy, how to effectively communicate environmental science to policy makers, environmental economics, and other topics such as climate change. Received excellent student evaluations.

2009 - 2014: University of Georgia, Carl Vinson Institute of Government, Athens, GA
Instructor. Developed and taught environmental training courses for local government officials and State legislators in Georgia through the Georgia Municipal Association, the Association County Commissioners of Georgia, and the Georgia General Assembly. Topics have included environmental sustainability, water resource issues in Georgia, low impact development, land use, energy and water. These courses were very well received.

August 1995 – 2014: Georgia Perimeter College, Clarkston, GA, and Georgia State University Department of Geoscience, **Part-time instructor.** Taught Physical and Historical Geology lecture and labs; undergraduate geology field camp, stratigraphy and sedimentology.

EMPLOYMENT HISTORY

January 2015 – August 2015: University of Georgia, Warnell School of Forestry, Athens, GA
Assistant Professor (part-time). Georgia Water Resources Conference Coordinator.

- Responsible for all aspects of planning and executing the 2015 GWRC; created and coordinated conference committees; solicited abstract and manuscript submittals, tracked expenses and obtained funding, reviewed proceedings, etc.

July 2009 – July 2014: University of Georgia, Carl Vinson Institute of Government,

Director, Environmental Policy Program

- Taught a graduate-level course on Environmental Policy in the UGA Odum School of Ecology (see above).
- Developed and taught one-week courses in environmental management and American environmental policy to local government and provincial officials in the Peoples' Republic of China.
- Developed and taught environmental training courses for elected officials through the Georgia Municipal Association, and the Association County Commissioners of Georgia.
- Collaborated with Georgia Sea Grant Program, assisting the City of Tybee Island, GA in assessing sea level rise adaptation strategies. Co-authored grant proposal. (This project recently won the 2014 Sea Grant National Superior Outreach Programming Award).
- Developed and implemented the "Georgia Legislative Environmental Policy Academy" for the Georgia House and Senate Natural Resources Committee to provide environmental background information to key legislators in a retreat setting.
- Represented the University and Institute to local and State government, providing environmental policy research and analysis to those governments and other State agencies
- Led a support team for development of the Governor's Water Supply Program; collaborating with State agency heads, responsible for compiling existing research and reports on reservoir feasibility in Georgia and writing final Strategy.
- For the Georgia Environmental Protection Division, developed a revised enforcement management strategy and penalty rationale for wastewater permit violations; developed a training protocol and materials for on-line wastewater data entry.

Nov. 2007- July 2009: Georgia Environmental Protection Division, Atlanta, GA
Assistant Branch Chief, Watershed Protection Branch

- Watershed manager for the Ochlockonee, Suwannee, Satilla, and St. Marys River basins. Responsibilities include coordinating all permitting activities in those basins, and meeting with permittees, local stakeholders, and elected officials.

2005 – 2007: Georgia Environmental Protection Division, Atlanta, GA
Water Planning Coordinator

- Coordinated Flint River Basin Regional Water Development and Conservation Plan, including writing and editing of final report, interacting extensively with USGS, USFWS, and other State agencies, as well as researchers at the University of Georgia, Albany State University, Georgia State University, and J.W. Jones Ecological Research Center.
- Authored changes to Dept. of Natural Resources Rules and Georgia statutes, which were finalized by the DNR Board and General Assembly, respectively.

2001-2004: Georgia Environmental Protection Division, Atlanta, GA
Environmental Program Manager. Supervisor of EPD Agricultural Permitting Unit in Water Resources Branch

1993-2001: Georgia Environmental Protection Division, Atlanta, GA

Senior Geologist. Evaluated and processed irrigation permits, evaluated groundwater resources of the Miocene Brunswick aquifers in coastal Georgia; assisted USGS with computer modeling of stream-aquifer systems in southwestern Georgia.

1992-1993: Georgia State University, Atlanta, GA, **Post-doctoral Research Associate.**

EXTRAMURAL FUNDING

R. Howard Dobbs Foundation: **Environmental Policy Academy for Georgia Legislators, \$50,000**, 2010, Principal Investigator.

Georgia Environmental Facilities Authority: **Governor's Water Supply Plan (\$150,000)**, 2010-2011, Principal Investigator

Georgia Sea Grant, Marine Extension, Georgia Coastal Resources Division, and Sapelo Island National estuarine Research Reserve, **Comprehensive strategic planning, needs assessment, and market analysis for Georgia Sea Grant Program, Marine Extension, Coastal Management Program, and the Sapelo Island National Estuarine Research Reserve (\$30,008)**, 2011-2012, Principal Investigator

Georgia Sea Grant: **Developing a 50-year climate adaptation plan for a highly vulnerable barrier island community, \$98,985**, 2012-2014, Co-Principal Investigator

US EPA: **Update of Water Resources Toolkits for Local Governments, \$130,396**, 2013-2014, Co-Principal Investigator

Georgia Environmental Protection Division: **Enforcement Management Strategy and Penalty Rationale Review and Update (\$30,000)** 2012-2013, Principal Investigator

Georgia Environmental Protection Division, **Growing Network Capability: Implementation of New Discharge Monitoring Reports Data Exchange."** (\$73,000) 2013-2014, Principal Investigator

Georgia Environmental Protection Division, **"Revising Georgia's Statewide Non-Point Source Management Program"** (\$75,000) 2013-2014, Principal Investigator

PUBLISHED TECHNICAL REPORTS

Laudato Si': An Action Plan for the Roman Catholic Archdiocese of Atlanta, co-author, November 2015 <https://archatl.com/catholic-life/refreshat/>

Georgia's Statewide Nonpoint Source Management Plan, Georgia Department of Natural Resources Environmental Protection Division, 2014, 245 p., co-author, compiler, and editor http://epd.georgia.gov/sites/epd.georgia.gov/files/related_files/site_page/Georgia_Nonpoint_Source_Management_Plan_2014.pdf

NPDES Enforcement Management Strategy for the Georgia Environmental Protection Division, 2013, 106 p.

Governor's Water Supply Program: Report to the Governor's Water Supply Task Force, December 2011, 28 p. <http://www.gefa.org/Index.aspx?page=537>

Coastal Plan Guidance Documents to support the *Coastal Georgia Water and Wastewater Permitting Plan for Managing Salt Water Intrusion*, 2006, editor. www.gadnr.org/cws

Recommendations for the Flint River Basin Regional Water Development and Conservation Plan, principal author, March 16, 2005, 227 p. www.gadnr.org/frbp

RELEVANT PUBLICATIONS

Rugel, K., Jackson, C.R., Dowd, J., **McDowell, R.J.**, Rasmussen, T., Golladay, S., Using hydrogeomorphic patterns to predict groundwater discharge in a karst basin: Lower Flint River Basin, southwestern Georgia, USA, *Journal of Hydrology Regional Studies*, in press.

Evans, J.M., Gambill, J, **McDowell, R.J.**, Hopkinson, Charles S., 2016, Tybee Island Sea Level Adaptation Plan, Final Report, April 2016, National Sea Grant Program https://www.researchgate.net/publication/289999590_Tybee_Island_Sea-Level_Rise_Adaptation_Plan (winner of the 2014 Sea Grant National Superior Outreach Programming Award)

McDowell, R.J., Pruitt, C.A., Bahn, Robert, eds., 2015, Proceedings of the Georgia Water Resources Conference, Univ. of Georgia, Athens, <http://www.gwri.gatech.edu/node/4070>

McDowell, R.J., Rugel, K., Dowd, J.F., Golladay, S.W., Jackson, C.R., 2012, Analysis of bedrock joints in Upper Cretaceous-Miocene rocks of the Georgia Coastal Plain, *Geological Society of America Abstracts with programs*, v. 44, no. 4.

Rugel, K., **McDowell, R.J.**, Dowd, J., Golladay, S. W., Jackson, C. R., 2012, Investigating groundwater/stream interaction between the Upper Floridan aquifer and streams in the lower Flint and Chattahoochee river basins, GA, USA, using stream chemistry, remote sensing and bedrock fracture orientation, *Geological Society of America Abstracts with programs*, v. 44, no.4.

McDowell, R.J., 2010, Assessing sustainable yield of aquifers as part of the Georgia Comprehensive Statewide Water Management Plan, *Geological Society of America Abstracts with Programs*, v. 42, no. 5.

Fritz, W.J., Sears, J.W., **McDowell, R.J.**, Wampler, J.M., 2007, Cenozoic Volcanic Rocks of Southwestern Montana: *Northwest Geology*, v. 36, p. 91-110.

Elfner, M.A. and **McDowell, R.J.**, 2004, Water conservation in Georgia – Bringing efficiency into mainstream thinking: *Journal of the American Water Works Association*, p. 136-142. (2005 AWWA Water Conservation Division Best Paper Award, by unanimous approval of AWWA Board of Directors).

Steele, W and **McDowell, R.J.**, 1998, Permeable thickness of the Miocene upper and lower Brunswick aquifers, coastal area, Georgia: Georgia Geologic Survey Information Circular IC-

103, 34 p.

McDowell, R.J., 1997, Evidence for synchronous thin-skinned and basement deformation in the Cordilleran fold-thrust belt: the Tendoy Mountains, southwestern Montana: *Journal of Structural Geology*, v. 19, no. 1, p. 77-87

Torak, L.J., and **McDowell, R.J.**, 1995, Groundwater resources of the lower Apalachicola-Chattahoochee-Flint river basins in parts of Alabama and Georgia - *Subarea 4* of the Apalachicola-Chattahoochee-Flint and Alabama-Coosa-Tallapoosa river basins: U.S. Geological Survey Open File Report 95-321, 162 p.

RECENT PROFESSIONAL ACTIVITIES

Chief Coordinator, Georgia Water Resources Conference, Athens, GA, 2015

Member-at-Large, Geological Society of America Geology and Public Policy Committee (2009-2012),

Management Board, Geological Society of America Geology and Society Division

Editor, Geological Society of America Geology and Society Division Newsletter (2009 – 2014)

Reviewer, “WaterFirst” Award applications for cities and counties in Georgia, 2009-2014

Invited Colloquium Speaker: “Is it Possible to Overcome the Communications Barrier Between Scientists and Policy Makers?” UGA Initiative for Climate and Society, May 2013

Invited Colloquium Speaker and panelist: “Eco-focus Filmfest 2012”: “Chasing Ice” climate change documentary, Athens, GA 2012

Invited Colloquium Speaker, “*Communicating Geoscience to Policy Makers*”: Univ. of Kentucky (2009), Columbus State Univ. (2010), Univ. of Alabama (2010), University of Florida (2011), Georgia State University (2011), University of Georgia (2012)

Retreatant, Institute for Georgia Environmental Leadership (IGEL) 2010

Executive Committee, Georgia Initiative for Climate and Society, Univ. of Georgia, 2010-2014

Steering Committee, Georgia Environmental Conference, 2009-2014

Steering Committee, Georgia Water Resources Conference, 2009-2015

Guest appearance, PBS Georgia Outdoors: “Pine Mountain”, 2008

Speaker and panelist, Georgia Environmental Conference, Savannah, August 2006, 2010, 2011, 2015

Speaker and panelist, Georgia Water Resources Conference, Athens, GA, 2005, 2007, 2011, 2015

Invited Speaker, “Water and the Future of Kansas”, Annual Conference, University of Kansas, Manhattan, KS, 2003

UNDERGRADUATE HONOR STUDENT MENTORING

(Student directed-research topics, University of Georgia)

Giovanni Righi, 2013: *Alternative water management policies for the Flint River Basin*

Matthew Tyler, 2012: *The connection between lobbyist influence and energy policy in Georgia*

Malin Dartnell, 2011: *Managing metro-Atlanta’s water supply in a cataclysmic drought*

Shayna Pollock, 2010: *The energy-water nexus in Georgia*

Allison Leigh, 2010: *Compilation of water management practices from the Georgia Comprehensive State-wide Water Management Plan*

UNIVERSITY AND COMMUNITY SERVICE

- Chair, Geology Curriculum Committee, Perimeter College (2020-present)
- Board of Trustees, Ignatius House Jesuit Retreat Center, (2016-present)
- Mentored undergraduate honors students from the Vinson Fellows program and the Roosevelt Institution at UGA, students in the Graduate Assistants Program in the Office of Vice-President for Public Service and Outreach, and student interns.
- Served on academic program review committees for the University of Georgia Marine Extension Service (2010), the Georgia Sea Grant Program at UGA (2010), and the Environmental Studies Program at Columbus State University in Columbus, GA (2011).

PROFESSIONAL DEVELOPMENT

- Institute for Georgia Environmental Leadership (IGEL) 2010
- Licensed Professional Geologist, Georgia registration #1960
- Geological Society of America (Geology and Society Division, Geology and Public Policy Committee (2009-2012), Joint Technical Planning Committee for 2013 Annual Meeting; Editor, Geology and Society Division Newsletter (2009 – present), Geology and Society Division Management Board member (2009 – present), Geology and Society Division Best Student Paper judge (2009-2014)
- American Geosciences Institute member