Lee A. Rieth Distinguished Lecture

America's Rivers and the American Experiment:

From Federalist Papers to Carbon Markets

Professor Martin Doyle • University of North Carolina

Monday, November 15, 2010 • Lecture, 5:30 p.m. • Reception, 6:30 p.m. • Forney Hall, Room G140

Sponsored by the School of Civil Engineering, the Department of Earth and Atmospheric Sciences, and the Global Sustainability Initiative (Discovery Park)

For 250 years America's rivers have been shaped by the needs of society – put to work based on the politics and economics of the time. But rivers have also played an integral role in shaping events and decisions, punctuating history with their influence. America's rivers instigated the Constitutional Convention in the 18th century, mitigated Northern versus Southern sectionalism of the 19th century, made settling of the West feasible in the early 20th century, energized the development of nuclear weapons during WWII, and by the 1970s were a focal point of pork barrel politics and environmental legislation. Perhaps more than any other natural resource or landscape feature, rivers are the significant thread weaving through US history. This presentation will trace the history of river engineering and water resource policy in the US, and how contemporary environmental policies are constrained by riverine events of the past.

Dr. Martin Doyle is a river scientist with training in hydrology and engineering. His work is at the interface of science, economics and policy of environmental restoration, water resources, and aging infrastructure. He is an associate professor at the University of North Carolina, with a PhD from Purdue University. His research has resulted in several awards including an NSF Early Career Award (2005), and a Guggenheim Fellowship (2009). For his work in bridging environmental science and policy, in 2008 Dr. Doyle was named an Aldo Leopold Leadership Fellow by Stanford University, and was chosen by the US Army Corps of Engineers as the inaugural Frederick Clarke Scholar for his work in water resources and environmental policy.

For more information, contact: Professor Suresh Rao, School of Civil Engineering; 765 496 6554; pscr@purdue.edu

EA/EOU

Lee A. Rieth Distinguished Lecture

Bringing Ecosystem Services to Market

Professor Martin Doyle • University of North Carolina

Tuesday, November 16, 2010 • Lecture, 3:30-4:30 p.m. • Reception 4:30 p.m. • Lawson Computer Science Building, Room 1142

Sponsored by the School of Civil Engineering, the Department of Earth and Atmospheric Sciences, and the Global Sustainability Initiative (Discovery Park)

Governments and industries are increasingly turning to market-based approaches to solve environmental problems, creating a broad spectrum of "ecosystem services" in which conserved areas generate credits in ecosystems services ranging from water quality and carbon sequestration to biodiversity preservation. More recently, the practice of "credit stacking" – selling the separate services from the same site as distinct credits into different regulatory markets – has become common but unregulated. Without oversight, stacking has the potential to undermine existing environmental laws as well as proposed carbon trading legislation. Stacking could flood ecosystem markets with low value ecological credits, undermining the economic value of such services while reducing incentives for new investment in ecosystem restoration. Stacked markets in ecosystem services will require more thoughtful environmental policy and possibly redefined property rights. It will also challenge the scientific community's ability to monitor and measure environmental processes with the precision likely to be required by "the market."

Dr. Martin Doyle is a river scientist with training in hydrology and engineering. His work is at the interface of science, economics and policy of environmental restoration, water resources, and aging infrastructure. He is an associate professor at the University of North Carolina, with a PhD from Purdue University. His research has resulted in several awards including an NSF Early Career Award (2005), and a Guggenheim Fellowship (2009). For his work in bridging environmental science and policy, in 2008 Dr. Doyle was named an Aldo Leopold Leadership Fellow by Stanford University, and was chosen by the US Army Corps of Engineers as the inaugural Frederick Clarke Scholar for his work in water resources and environmental policy.

For more information, contact: Professor Suresh Rao, School of Civil Engineering; 765 496 6554; pscr@purdue.edu

EA/EOU