

# Assessing and Managing Ecological Impacts of Paved Roads



## LANCE GUNDERSON

During the 20th century, the US built a system of over 4 million miles of paved roads. Roads impact air and water quality, alter habitats, increase wildlife mortality and the dispersal and migration of plants and animals. An increasing awareness of environmental issues, regulatory changes, and new solutions has led the National Academy of Sciences/National Research Council to address the ecological impacts of roads. Better understanding of road ecology and improved methods of integrating that understanding into all aspects of road development are critical.

---

Gunderson is an associate professor in the Department of Environmental Studies at Emory University, where he served as founding chair from 1999-2005. He serves as co-editor in chief of *Ecology and Society* and is a member of the science advisory board for the Grand Canyon Research and Monitoring Center. He has also served as the executive director of the Resilience Network, a program of the Beijer International Institute for Ecological Economics, Swedish Royal Academy of Sciences. He is now vice-chair of the Resilience Alliance, an international network of researchers who study management of regional-resource systems. Gunderson's interests are in the human and institutional dimensions to resource ecology. He has published over 50 articles on the ecology and management of the Everglades and co-edited the following books: *Barriers and Bridges to the Renewal of Ecosystems and Institutions*, which compares case histories of managing large, complex ecosystems; *Panarchy: Understanding Transformations in Systems of Humans and Nature*, which synthesizes the interdisciplinary concepts that underpin sustainable actions; and *Resilience and the Behavior of Large Scale Ecosystems*, which documents nonlinear ecosystem dynamics.

---

Tuesday, January 16, 2007 • 3:30 PM  
Global Institute of Sustainability, Tempe Center, Room 158  
Arizona State University, Tempe campus

*The Institute is on the SE corner of Mill and University. Limited parking (\$2 hour) is available on the north end of Tempe Center. We also have a limited number of parking stickers valid for Lot 16 spaces. For more information, contact Tee Engle at 480-965-2975 or [Tamlin.Engle@asu.edu](mailto:Tamlin.Engle@asu.edu)*

The Wrigley Lecture Series is funded through the generous support of Julie Ann Wrigley. For more information, call 480-965-2975 or go to <http://sustainable.asu.edu>.