THE WATER INSTITUTE SEMINAR SERIES

Interpreting Long-Term Data from Ontario Lakes: Ecological Surprises and Emerging Issues

Dr. Andrew Paterson
Research Scientist
Ontario Ministry of the Environment

William G. Davis Computer Research Centre
Room 1302
University of Waterloo

Thursday, November 25, 2010
11:30 a.m.

WATER.UWATERLOO.CA

Aquatic ecosystems have been altered by a changing climate, pollutants, the alteration of water courses and landscapes, and the introduction of species that act as ecosystem engineers. These multiple stressors may also interact to the detriment of biota and the recreational value of aquatic environments. There is no better source of status and trend information than long-term records from well designed and managed monitoring programs and, despite their scarcity, these programs have made enormous contributions to ecological understanding and to environmental policy development and evaluation. Long-term monitoring of lakes and streams in south-central Ontario has been conducted by scientists at the Ontario Ministry of the Environment's Dorset Environmental Science Centre (DESC) since the mid-1970s. Here, three examples from DESC's monitoring and paleoecological datasets are given to illustrate the value of long-term records. For example, the emerging issues of long-term declines in total phosphorus and calcium concentrations in many Ontario lakes, despite increases in shoreline residential development in some catchments and long-term declines in sulphate deposition regionally, are described. These examples illustrate the value of long-term data, but also the challenges of translating complex results into policy, and into a language easily understood by lay audiences.

Free Admission - Open to the Public

Light refreshments will be provided

UNIVERSITY OF WATERLOO