**Project Overview**

The Environmental Sensor Network (ESN) includes six eddy covariance (EC) flux tower monitoring stations to measure fluxes across the Western basin of Lake Erie, including two stations (PermS1, PermS2) on permanent structures in Lake Erie, a vessel-mounted station on the LEC's research boat (BoatS), a station in an agricultural field, a station in a coastal wetland and large tower station in a mixed oak forest known as “Oak Openings”. ESN is a contributing member of the Global Lake Ecological Observatory Network (GLEON) and the Ameriflux Network. Biometric and chamber based measurements of ancillary ecosystem characteristics are conducted at both the site and watershed scales.

**Selected Preliminary Results**

Early analysis of the fluxes at the marshland site revealed that the wetland released evident methane especially during daytime at a much higher magnitude than other temperate wetlands. The cropland generally releases methane during the daytime, and uptakes small amounts of methane at night. However, the orders of magnitude fluxes in the cropland are much smaller than in the marshland.

**Acknowledgements**

The ESN is funded by the FSML program of the National Science Foundation, National Oceanic and Atmospheric Administration and the United States Department of Agriculture Forest Service. It is overseen by Dr. Jiquan Chen, Dr. Carol Stepiec, Dr. Johan Gottgens, Dr. Richard Becker, Dr Thomas Bridgeman, and Dr. Kevin Czajkowski at the University of Toledo.

**Contact**

Michael Deal
Email: michael.deal@utoledo.edu
Phone: 419-530-4278
Fax: 419-530-4421