**Biogeochemistry and Carbon Cycle of Lake Superior**  
**August 17-18, 2009, Kemp Station, Woodruff, WI**  

All meals will be in the Kitchen-Dining Hall unless otherwise specified  
The meeting will be held in the Boathouse Classroom

**Monday, August 17**

7:30 – 8:30  *Group breakfast*

8:30-9:00  Welcome and introductions

9:00-10:00  The imbalanced carbon budget of Lake Superior  
*Jim Cotner* - Accounting for carbon in Lake Superior: Why limnologists should stick to limnology and stay away from accounting

10:00-10:30  Break

10:30-11:20  Physical Processes  
*Val Bennington* - Interannual variability in the circulation of Lake Superior  
*Jay Austin* - Update on the Lake Superior mooring array

11:20-11:45  Discussion

11:45-1:00  *Group lunch*

1:00-2:15  Production and Respiration  
*Bob Stern* - Changes in Lake Superior carbon cycling between the cool 1990s and the warm 2000s  
*Hunter Carrick* - The role of microplankton in Great Lake carbon balances  
*Mike McKay* - Life Under Ice: Insights into winter production in the Great Lakes

2:15 – 2:30  Break

2:30-3:45  Production and Respiration Continued  
*Randall Hicks* - Do Archaea and Nitrification affect the Lake Superior carbon cycle?  
*Tom Hrabik* - Diel vertical migration in three trophic levels in the open water food web of Lake Superior  
*Martijn Woltering* – Ecology of lacustrine *Crenarchaeota* in Lake Superior: implications for the application of the TEX86 temperature proxy

3:45-4:10  Air-lake gas fluxes  
*Noel Urban* - CO₂ fluxes, mass transfer coefficients, and putative respiration rates in Lake Superior: what do they tell us?

4:10-5:00  Discussion

6:00  *Meet to go to dinner* (drive to a local restaurant)
Tuesday, August 18

7:30-8:30  Group breakfast

8:30 – 9:15  Small lakes

Paul Hanson – The role of small lakes in landscape-scale carbon cycling

9:15-10:30  Sediment Processes

Tom Johnson (given by Sergei Katsev) - Spatial variability in C burial in the deep offshore basins of Lake Superior

Sergei Katsev - Sediment geochemistry and seasonality in benthic nutrient fluxes in Lake Superior

Jiying Li - Sediment diagenesis in East and West basins of Lake Superior

10:30 – 10:50 Break

10:50-12:30  Modeling

Galen McKinley – Carbon cycle variability in the open waters of Lake Superior: view from the coupled CyCLEs model

Cory MacDonald - Bayesian calibration of the CyCLEs ecosystem model: a test-bed approach

Brooke White - Modeling ice and biogeochemistry in Lake Superior

Stephen Oni - Terrestrial-aquatic carbon cycling in Lake Simcoe: how much can a process-based biogeochemical model explain?

12:30-2:00  Group lunch

2:00-2:25  Remote Sensing

Colleen Mouw - Preliminary evaluation of existing ocean color inversion algorithms on Lake Superior

2:25-3:15  Land carbon cycling

Ankur Desai - Signatures of the Great Lakes in atmospheric tracers

Victoria Vasys - Lake Superior’s John Hancock: Unique atmospheric signature in tall tower CO2

3:15-4:15  Discussion of future research priorities

4:15  Adjourn