Monday, May 13, 2013
7:00-8:30pm  Meeting Check In (Franklin Building)

Tuesday, May 14, 2013
6:30-8:00am  Breakfast (Osgood Building)
7:00-8:00am  Meeting Check In (Franklin Building)
8:00–9:35am  Overview of Programs and Strategic Directions (Franklin Building)  
Mike Kuperberg
8:00-8:05am  Welcome and Introductory Comments.................................M. Kuperberg
8:05-8:20am  BER Programs.................................................................S. Weatherwax
8:20-8:35am  CESD Programs & Strategic Plan......................................G. Geernaert
8:35-8:55am  TES Program Goals, Objectives, Program Structure and Highlights….D. Stover
8:55-9:15am  SBR Program Goals, Objectives, Program Structure and Highlights….....P. Bayer
9:15-9:35am  GSP Program Overview.....................................................J. Graber
9:35-10:00am  Break
10:00-12:00pm Plenary Session I – Research and Simulation across Scales  
David Lesmes
10:00-10:30am NGEE-Arctic: Migrating knowledge across scales to improve climate prediction.............................................................P. Thornton
10:30-11:00am Modeling the planets microbiome and its feedback on climate..........J. Gilbert
11:00-11:30am Advanced characterization and analyses of complex microbial communities.............................................................J. Banfield
11:30-12:00pm The biomolecular and genetic basis of mercury methylation..............J. Parks
12:00-2:00pm  Lunch (Osgood Building)
2:00-5:00pm  Poster Session I (Franklin Building)

2:00-3:30pm  Poster Subsession A
3:30-5:00pm  Poster Subsession B

5:30-7:00pm  Dinner (Osgood Building)

7:00-8:30pm  Concurrent Sessions - I (Franklin Building)

Concurrent Session 1: Belowground Ecology (Ben Franklin Hall)  Dan Stover

7:00-7:20pm  Soil warming and the vulnerability of old soil organic carbon…………….M. Torn

7:20-7:40pm  Stem respiration and its connection with soil respiration…………………J. Tang

7:40-8:00pm  Partitioning in Trees and Shrubs (PiTS): A field research facility for testing dynamic carbon partitioning representations within global models……………………………………………………….C. Iversen

8:00-8:20pm  Temperature research of soil microbial efficiency and its feedbacks to climate………………………………………………………………………………J. Melillo

8:30pm  Adjourn

Concurrent Session 2: Terrestrial-Aquatic Interfaces (Room 1)  Mike Kuperberg

7:00-7:20pm  A connection to deep groundwater alters ecosystem carbon fluxes and budgets: example from a Costa Rican rainforest……………………………D. Genereux

7:20-7:40pm  Convergence of the effect of root hydraulic functioning and root hydraulic redistribution on ecosystem carbon balance and drought-induced vegetation mortality across divergent forest ecosystems……………………………………………………………………A. Noormets

7:40-8:00pm  Understanding the role of landscape structure in coupled carbon and water dynamics……………………………………………………………………H. Barnard

8:00-8:20pm  Toward a predictive understanding of microbial carbon turnover in a northern peatland……………………………………………………………………J. Kostka

8:30pm  Adjourn
Concurrent Session 3: Reactive Transport in Subsurface Systems (Room 3)   Paul Bayer

7:00-7:20pm  Geoelectrical measurement of multi-scale mass transfer parameters..........................................................F. Day-Lewis

7:20-7:40pm  Modeling uranium desorption and transport from decimeter to plume scales.........................................................G. Curtis

7:40-8:00pm  Uranium transport across ground water surface water interfaces: Effect of wetland plans on the sediment biogeochemistry......................................P. Jaffe

8:00-8:20pm  Biogeochemical cycling of manganese and its effect on uranium mobility.................................................................B. Tebo

8:30pm  Adjourn

Concurrent Session 4: Transport Processes of Inorganics (Room 18/19)   Roland Hirsch

7:00-7:20pm  Products of uranium reduction: Are we modeling the correct species?..K. Kemner

7:20-7:40pm  Inorganic geochemical controls on Neptunium transport: co-precipitation in minerals...................................................P. Burns

7:40-8:00pm  Collaborative Research: The importance of organo-iodine and iodate in iodine-$^{127,129}$ speciation, mobility, and microbial activity in groundwater at DOE sites........................................P. Santschi

8:00-8:20pm  The biogeochemical controls on plutonium transport.........................A. Kersting

8:30pm  Adjourn

Wednesday, May 15, 2013

6:30-8:00am  Breakfast (Osgood Building)

8:00-9:00am  Plenary Session II- Evolution and Long-Term Payoffs of Field Projects   Mike Kuperberg

8:00-8:30am  Long-term experiments and observations: Fertile ground for model benchmarking and improvement in the context of environmental change.................................................................P. Hanson

8:30-9:00am  Linking fluvial processes and elemental cycling in the Old Rifle, CO aquifer.................................................................K. Williams
9:00-12:00pm Poster Session II (Franklin Building)

9:00-10:30am Poster Subsession C

10:30-12:00pm Poster Subsession D

12:00pm-1:30pm Lunch (Osgood Building)

1:30-3:00pm Plenary Session III – University Highlight Talks (Franklin Building) Paul Bayer

1:30-1:50pm Resilience of forest carbon storage to low-intensity disturbance: Insights from a large-scale experiment within a long-term AmeriFlux site in the upper Great Lakes..............................C. Gough

1:50-2:10pm Permafrost carbon and climate feedbacks in a warmer world ..........T Schuur

2:10-2:30pm Deciphering molecular-scale processes to describe field-scale phenomena in carbon and metal cycling........................................S. Fendorf

2:30-2:50pm Genome-scale modeling of carbon and metal cycling in the subsurface.................................................................D. Lovley

3:00-4:30pm Concurrent Sessions – II (Franklin Building) Dan Stover

Concurrent Session 5 Disturbances in Terrestrial Ecosystems (Ben Franklin Hall)

3:00-3:20pm Responses of pinon and juniper to rainfall manipulation: Mechanisms of drought-induced mortality and the implications of long-term acclimation.........................................................W. Pockman

3:20-3:40pm The impact of Mountain Pine beetle disturbance on carbon cycling in high elevation Western forests.........................................................D. Moore

3:40-4:00pm Responses of subalpine tree recruitment to warming within and above current altitudinal ranges.........................................................L. Kueppers

4:00-4:20pm It’s all connected: Linking above- and belowground dryland responses to climate change.........................................................S. Reed

4:30pm Adjourn
Concurrent Session 6: Bio- and Geo-chemical Controls on Contaminant Transport (Room 1)

3:00-3:20pm  Kinetics of nitrate-dependent uranium and iron oxidation.....................P. O’Day

3:20-3:40pm  Metaproteomics of metal and radionuclide bioreduction.......................S. Pfiffner

3:40-4:00pm  Isotopic characterization of mercury biogeochemistry............................J. Blum

4:00-4:20pm  Reactivity and bioavailability of nanoscale mercury sulfides.................H. Hsu-Kim

4:30pm  Adjourn

Concurrent Session 7: Investigating Biogeochemical Processes Using Advanced Technologies (Room 3)

3:00-3:20pm  COS Flux Measurements: New instrumentation and eddy flux observations for a carbon cycle tracer at one-millionth the concentration of CO$_2$..........................................................K Maseyk

3:20-3:40pm  Terrestrial carbon cycling: Insights gained from radiocarbon measurements..........................................................K. McFarlane

3:40-4:00pm  Coupling synchrotron and biogeochemical techniques to understand biogeochemical critical element cycling at molecular to pore scales.........................................................J. Bargar

4:00-4:20pm  Investigating biogeochemical and microbial community dynamics in a groundwater-river water interaction zone promoted by seasonal hydrologic fluctuations........................................J. Zachara

4:30pm  Adjourn

Concurrent Session 8: Multi-scale Modeling of Terrestrial Environments (Room 18/19)

3:00-3:20pm  Hybrid multiscale modeling of coupled hydrologic and biogeochemical terrestrial processes.................................................T. Scheibe

3:20-3:40pm  Scaling of coupled hydrology and biogeochemistry from genomes to landscapes...............................................................B. Riley

3:40-4:00pm  Towards a complete description of the hydrologic cycle: High resolution, continental-scale simulations with a parallel, integrated model.................................................................R. Maxwell

4:00-4:20pm  Towards a scalable approach to modeling hydrological and biogeochemical processes....................................................R. Leung
4:30pm Adjourn

4:30-5:30pm  *Plenary Session IV – Workshops and Other Programmatic Activities*  
   **Dan Stover**
   4:30-4:45pm  EMSL Workshop: Belowground carbon cycling........................................N. Hess
   4:45-5:00pm  Integrated Water Cycle Workshop......................................................R. Leung
   5:00-5:15pm  GOAmazon update..................................................................................W. Ferrell
   5:15-5:30pm  NGEE Tropics Workshop......................................................................R. Norby
   5:30-5:45pm  Closeout/Announcements
   5:45-7:00pm  Dinner (Osgood Building)
   7:00pm Adjourn

7:00-8:30pm  *Optional Working Group and Team Meetings (Franklin Building)*

**Working Group Meetings**

Mercury (Room 18).........................................................L. Liang & N. Yee
Radionuclides (Room 19)...................................................A. Kersting & J. Zachara
ESS Multi-scale Modeling and Workflows (Room 1)........D. Lesmes, D. Ricciuto & T. Scheibe

**Team Meetings**

NGEE-Arctic (Ben Franklin Hall)..............................................S. Wullschleger
SPRUCE (Ben Franklin Hall).....................................................P. Hanson
AmeriFlux (Room 3).............................................................M. Torn