December 18, 2012

Minutes: AGU Groundwater Technical Committee meeting, Dec. 3, 2012
Barbara Bekins (Chair) and Geoff Bohling (Deputy Chair)

Membership and Chairs for 2013-2014

- Upcoming two-year term will run from Jan. 1, 2013-Dec. 31, 2014, with Bohling as chair. Following discussion of possible candidates for deputy chair for the upcoming term, Mary Hill volunteered to serve in that capacity and was accepted by general consensus. KC Carroll volunteered to serve after Mary Hill.
- Most attendees expressed interest in continuing as committee members. Several stated that they would rotate off and would try to recruit replacements.
- Mary Hill proposed that the committee should have a formal approach for bringing in new membership, with a third (four of 12) of the existing members rotating off every term to be replaced by new members. There was general agreement that this would be a good policy.

Discussion of role of technical committees with Eric Wood

- *Eric Wood* (who will be Hydro Section President for 2013-2014) stated that the role of the technical committees is to "help define how the field goes forward from a meeting perspective." Technical committees should make sure that major thrusts of field are addressed in the meetings. Also, he is encouraging technical committees to organize topical conferences, such as Chapman Conferences.

Newsletter articles for Hydrology Section Newsletter

Jesus Gomez, Bayani Cardenas, and *Christine Hatch* contributed an article on the connectivity of groundwater and surface water to the Dec. 2012 newsletter.

Tim Scheibe volunteered to contribute an article on multiscale modeling, targeted for the July 2012 issue.

Mary Hill volunteered to contribute an article on model transparency and refutability, possibly working with *Christine Shoemaker*. Since the committee is only allowed to contribute one article per year, we decided to hold onto this idea for next year.

Dec 2013 meeting proposed session topics
Hydrology Program Chair, Stefan Kollet, stefan.kollet@uni-bonn.de

1. Groundwater and climate change – *Christine Hatch*
2. Constraining groundwater models with geology
   – *Mary Hill*, possibly with Philippe Renard; possibly integrating surface water
3. Regional or Megascale Hydrogeology – *Bayani Cardenas* will recruit convenors
4. Uncertainty quantification
   – Possibly Ming Ye at Florida State; *KC Carroll* will look into it
5. Energy Development and Groundwater Resources
   – *Christine Shoemaker* proposed idea; *Barbara Bekins* will take lead, possibly with Jim Barker; *Mary Hill* suggested Rick Healy as possible invited speaker; Christine Hatch mentioned possibility of making it a Union session;
6. GW/SW Interactions (with three subtopics) – *Christine Hatch* (coord. w/ SW TC)
7. Contaminant Transport & Remediation – *Jason Gerhard and KC Carroll*

8. Nonpoint source contamination – *Thomas Harter* (coord. w/ Vadose Zone TC)
9. Colloid Transport – *Jason Gerhard* (coord. w/ Vadose Zone TC)

Student Paper Judging

Martha Conklin, Hydrology Section Secretary reported that 14 student judging slots were left to fill for this meeting, all later in the week. This is a very small percentage of the total number of hydro student presentations. For 2012, only 10 prizes will be awarded to hydro section students, which will be registration for next year's meeting.

GW Technical Committee Website:

- *KC Carroll* is maintaining the website at PNNL. It currently contains list of members, a list of groundwater-related sessions at the 2011 meeting (as identified by Barbara Bekins), and the list of GWTC-proposed sessions for the 2012 meeting.
- *Barbara Bekins* proposed including the number of abstracts and number of oral sessions for each session.
- *KC Carroll* suggested the possibility of including a list of upcoming meetings of interest.

Attendees	**Institution**	**E-mail**
Barbara Bekins (chair)	U. S. Geological Survey	babekins@usgs.gov
Geoffrey Bohling (co-chair)	Kansas Geological Survey	geoff@kgs.ku.edu
Bayani Cardenas	University of Texas	cardenas@jsg.utexas.edu
Christine Hatch	U. of Mass-Amherst	chatch@geo.umass.edu
Christine Shoemaker	Cornell University	CAS12@cornell.edu
Jesus Gomez	New Mexico Tech	jdgomez@nmt.edu
Mary Hill	USGS	mchill@usgs.gov
Jason Gerhard	U. of Western Ontario	jgerhard@eng.uwo.ca
Roseanna Neupauer	Univ. of Colorado	Roseanna.Neupauer@colorado.edu
Thomas Harter	UC Davis	thharter@ucdavis.edu
Tim Scheibe	Pacific Northwest Labs	tim.scheibe@pnl.gov
KC Carroll	Pacific Northwest Labs	Kenneth.Carroll@pnnl.gov

Four additional committee members (Steve Silliman, Matt Covington, Bwalya Malama, and Phoolendra Mishra) were unable to attend the AGU meeting this year or were thrown off by the unusual timing of the committee meeting compared to previous years.

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Fall 2012 Groundwater-related sessions

Bohling's pick of sessions with significant groundwater content;
38 of 98 Hydrology sessions

All had one poster session.

Title	Number of oral sessions
Dynamics of Fluids and Transport in Fractured Porous Media	2
Environmental Vadose Zone Hydrology	0
Exploring Environmental Impacts of Hydraulic Fracturing in the Subsurface	0
Groundwater-Surface Water Interactions: Dynamics Across Spatial and Temporal Scales	2
Groundwater-Surface Water Interactions: Three Decades of Transient Storage Analysis to Understand River Transport Watershed Connections	0
Hydrological, Geomorphological, Biological, and Geochemical Processes in Karst Aquifers	0
Characterization of Groundwater Systems	2
Microorganisms, Colloids, Engineered Nanoparticles, and Emerging Contaminants in the Environment	2
Shallow and Deep Geothermal Systems: Characterization, Integration, Stimulation, Simulation, and Induced Seismicity	2
Groundwater-Surface Water Interactions: Quantifying Their Functional Relevance with Measurements and Models of Water and Solute Dynamics	1
Multiphase Flow, Interfacial, and Geomechanical Processes Controlling CO2 Sequestration	3
Advanced Computational Modeling Paradigms for Hydrologic Systems	0
Large-Scale, Long-Term Changes in Catchment Hydrology and Water Quality	1
Sustainable Remediation of Contaminated Groundwater	0
Reactive Transport in Permeable Media	1
Advances in Geochemical and Hydrogeological Studies of CO2 Fate and Transport at Geological CO2 Sequestration Sites	3
Anomalous Transport, Mixing, and Reaction in Hydrological Systems	2
Developing the Science for High-Resolution Water-Energy-Biogeochemical Cycle Modeling	1
Remote Sensing, Modeling, and Ground-Based Monitoring of Groundwater Resources	2
Uncertainty Quantification and Parameter Estimation: Impacts on Risk and Decision Making	3
Isotope Techniques for Revisiting Water Cycle in Catchments	1
Recent Advances in Modeling Water in the Coupled Earth System	1
Underground Testing, Monitoring, and Modeling in Different Formations	0
A Vision for the Future: Exploring the Value of Geophysics in Hydrology	1

Hydrogeophysics: Lab to Field Scale Characterization	1
Recent Advances in Groundwater Hydrology	0
Novel Developments in Characterization and Modeling of Physical, Chemical, and Biological Processes Controlling Contaminant Transport and Remediation	3
Geological CO2 Storage Monitoring From Injection Zone to Vadose Zone: Characterization, Detection Methods, and Field Applications	1
Nonpoint Source Fluxes in the Vadose Zone and Groundwater	1
Modern Approaches in Hydrogeology: Conceptual and Numerical Model Advances in Cross-Disciplinary Approaches	1
Recent Advances in Theoretical, Numerical, and Experimental Methods in Flow and Transport in Porous Media	2
Complexity, Falsifiability, Transparency, and Uncertainty in Environmental Modeling	1
Advances in Uncertainty Assessment and Sensitivity Analysis Methods for Hydrological Modeling	1
Persistent Problems and Modern Approaches in Multiphase Flow and Transport in Porous Media: From Pore to Laboratory and Field Scale	1
Measurement, Modeling, and Management of Coastal Aquifers	2
Theoretical, Numerical, and Experimental Advances in Pore Scale Investigation of Porous Media	2
Impacts of Groundwater Inputs to Coastal Ecosystems	0
Understanding Process Dynamics in the Critical Zone at Different Scales	1