

January 3, 2012

Minutes: AGU Groundwater Technical Committee meeting 12/6/2011
Barbara Bekins (chair) and Geoff Bohling (co-chair)

Terms of Members

- The terms for committee members and chairs (originally scheduled to expire in June 2012) have been extended until after the 2012 Dec. meeting. All of the members, chair, and co-chair agreed to the extended terms.
- Members were polled to identify those who would prefer to continue for another 2-year term. All but two present (plus Christine Schoonmaker via e-mail) expressed interest in remaining. *Roseanna Neupauer* and *Steve Silliman* indicated they might rotate off. In addition, K. C. Carroll (PNNL), Phi Mishra (LANL), and Bwalya Malama (Boise State) expressed interest in joining the committee.

Listing of Hydrology Section Sessions

At the 2010 meeting the committee agreed to try to list GW-related sessions on our committee website. Although not done in 2011 this remains on our wish list.

Newsletter article for Hydrology Section

Matt Covington wrote an article Karst and Fracture Hydrogeology that appeared in the July 2011 Hydrology Section newsletter

Jesus Gomez and *Christine Hatch* volunteered to write the next article on GW/SW interactions targeted for the July 2012 newsletter.

Dec 2012 meeting proposed session topics

Hydrology Program Chair, Mike Cosh, Michael.Cosh@ARS.USDA.GOV

1. GW/SW to coordinate 3 session proposals again
– *Christine Hatch* will again coordinate with the SW Tech Committee
2. Coastal Hydrogeology – *Jeff King*
3. Model sensitivity, Global versus local optimization– *Mary Hill*
4. Karst and Fracture Flow – *Matt Covington*
5. Hydrogeology combined with Geophysics
– *Bwalya Malama* and *Kris Kuhlman* to coordinate with Hydrogeophysics TC
6. Nonpoint source agricultural effects on groundwater quality
– *Thomas Harter* will coordinate with the UZ Tech. Committee
7. Geologic CO₂ sequestration – *K.C. Carroll*
8. Groundwater and Climate change – Perhaps as a Union session but then may need a social science aspect

Student Subcommittee and Student Paper Judging

Roseanna Neupauer volunteered to represent GW on the Student Subcommittee
This committee will promote and facilitate student involvement in AGU and the Hydrology Section's activities.

In general the committee members felt that student paper judging is going much better since it was automated in 2010 and that 2011 went even better than 2010.

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Some suggestions:

1. Add a check box to registration in which attendees indicate willingness to judge.
Distribute judging assignments among other presenters in the session.
2. Notify session chairs earlier of need to identify judges.

GW Technical Committee Website:

In the past this was hosted by Pacific Northwest National Lab and maintained by *Tim Scheibe*. Presently the website link is not accessible. Tim volunteered to ask about continued hosting of the site at PNNL and *K C Carroll* volunteered to maintain the site if it remains at PNNL.

| 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 Nevada, Reno | chatch@unr.edu |
| Jeff King | USGS | jking@usgs.gov |
| Jesus Gomez | New Mexico Tech | jdgonmez@nmt.edu |
| Mary Hill | USGS | mchill@usgs.gov |
| Matt Covington | Karst Research Institute ZRC SAZU | speleophysics@gmail.com |
| Roseanna Neupauer | Univ. of Colorado | Roseanna.Neupauer@colorado.edu |
| Steve Silliman | Notre Dame University | Silliman.1@nd.edu |
| Kris Kuhlman | Sandia Labs | klkuhlman@sandia.gov |
| Thomas Harter | UC Davis | thharter@ucdavis.edu |
| Phi Mishra | Los Alamos Labs | pkmishra@lanl.gov |
| Tim Scheibe | Pacific Northwest Labs | tim.scheibe@pnl.gov |
| K. C. Carroll | Pacific Northwest Labs | Kenneth.Carroll@pnnl.gov |
| Bwalya Malama | Sandia National Lab | bnmalama@sandia.gov |

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2011 Groundwater Sessions

| Title | # merged # Abstracts | # Oral | # Poster |
|--|-------------------------|--------|----------|
| Fractures, Fracture Networks and Fractured Media | 3 59 | 3 | 1 |
| Combining Learnings from Natural Releases of CO2 for CO2 storage: Processes, Impacts and Scale | 25 | 1 | 1 |
| Modeling Coupled Physical and Chemical Transformations Affecting the Performance of GeoEnergy Systems | 3 23 | 1 | 1 |
| Equations of State in Subsurface Flow Process Modeling & Simulation | 14 | 0 | 1 |
| Fate and Transport of Emerging Contaminants, Microorganisms, Colloids, and Engineered Nanoparticles in the Environment | 2 55 | 3 | 1 |
| Field Studies, Modeling, Parameter Estimation and Risk for Geological Carbon Sequestration | 2 47 | 2 | 1 |
| Natural and Enhanced Geothermal Systems: Characterization, Integration, Stimulation, Simulation & Induced Seismicity Risk | 2 45 | 2 | 1 |
| Impact of heterogeneity at hydrological interfaces for biogeochemical reactions, surface water groundwater interactions, and other hydrological processes | 2 41 | 2 | 1 |
| Heterogeneity and Geologic Storage of CO2 | 21 | 1 | 1 |
| Hydro-epidemiology: Understanding Connections Between Hydrology and Human Health | 2 27 | 1 | 1 |
| Uncertainty Assessment, Optimization, and Sensitivity Analysis in Integrated Hydrologic Modeling as Applications of HydroInformatics | 3 46 | 2 | 1 |
| Partitioning Evaporation, Transpiration and Deep Percolation in Vegetated Catchments | 23 | 1 | 1 |
| Quantifying and Evaluating Spatial Heterogeneity in Porous Media | 29 | 1 | 1 |
| High-resolution Multi-Sensor Precipitation Estimates: Recent Advances and User Perspectives | 3 41 | 2 | 1 |
| Characterization of Fault Zone Hydrology | 41 | 2 | 1 |
| Where the Land Meets the Sea: Ocean-Aquifer Interactions | 2 35 | 2 | 1 |
| Complexities of Flow and Transport in Porous Media | 2 57 | 3 | 1 |
| Computational Sciences and Water-Applications in Hydrology and Groundwater Management | 31 | 1 | 1 |
| Groundwater and Climate Change: Evidence from Remote Sensing and In Situ Monitoring | 21 | 1 | 1 |
| Groundwater - Surface Water Interactions: Dynamics Across Spatial and Temporal Scales | 51 | 2 | 1 |
| Groundwater - Surface Water Interactions: Experimental Tracers, Monitoring, & Modeling Techniques | 37 | 2 | 1 |
| Impact of heterogeneity at hydrological interfaces for biogeochemical reactions, surface water groundwater interactions, and other hydrological processes (was 3rd GW-SW interaction proposed session) | 2 41 | 2 | 1 |

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| Title | # merged # Abstracts | # Oral | # Poster |
|---|-------------------------|--------|----------|
| Hydrological, geomorphological, biological, and geochemical processes in karst aquifers | 2 25 | 1 | 1 |
| The Multiscale Nature of Mixing and Reaction in Heterogeneous Media: Advances in Experiment and Theory | 33 | 1 | 1 |
| Model/Parameter Uncertainty Quantification and Impacts on Risk and Decision Making | 2 39 | 2 | 1 |
| Recent Advances in Groundwater Hydrology (Poster Only) | 21 | 0 | 1 |
| Recent Advances in Hydrogeology: Innovative Solutions to Single and Multi-pFlow and Transport Issues | 2 47 | 2 | 1 |
| Geophysics for the Critical Zone | 24 | 1 | 1 |
| Hydrogeophysics: Monitoring and Modeling of Hydrological Processes from Lab to Field Scale | 30 | 1 | 1 |
| Advances in the Transport and Remediation of Organic Contaminants | 37 | 2 | 1 |
| Multiscale and Coupled Complexity in Geologic Carbon Sequestration | 44 | 2 | 1 |
| Environmental Vadose Zone Hydrology (Posters) | 24 | 0 | 1 |
| Interfacial Processes in Subsurface Flow and Transport: Linking the Pore-Scale to the Continuum-Scale | 18 | 0 | 1 |
| Nonpoint Source Fluxes in the Vadose Zone and Groundwater | 26 | 1 | 1 |
| Agricultural Surface and Groundwater Quality | 38 | 2 | 1 |
| Threats on Water: Chemical and Isotope Monitoring & Integrated Modeling of Water Quality across Scale in Eco-hydrological Systems | 32 | 1 | 1 |