



CZO@AGU 2014

December 15-19
San Francisco, California



CRITICAL ZONE OBSERVATORIES
studying the zone where rock meets life

funded by NSF



Agenda

Date/Time of Presentation	Location/Session Info	Presentation Title/Author(s)	Affiliation
Monday, December 15, 2014			
8:00 – 12:30 pm	ED046-P. Virtual Undergraduate Earth, Atmospheric, Ocean, and Space Science Research and Outreach Showcase (<u>Virtual Poster Session</u>)	Reconstructing Peak Discharge in a Colorado Front Range Headwater Stream During the September 2013 Storm BRENNER, A.; ANDERSON, R.; ANDERSON, S.; WINCHELL, E.; SCHELLHASE, D.; MARQUEZ, J.	Boulder Creek
8:15 - 8:45 AM	EP11C. To See the World in a Grain of Sand: Novel Applications and Important Limitations of Detrital Analyses in Sedimentology, Tectonics, and Geomorphology I Moscone West - 2005	EP11C-02A. Widespread Grain Size Bias in Detrital Cosmogenic Nuclide Studies: Implications for Sampling in Steep Terrain LUKENS, C.; RIEBE, C. ; SKLAR, L.; SHUSTER, D.	Southern Sierra
9:00 - 9:15 AM	H11M. Large-Scale Field Experiments and Long-Term Observing Networks I Moscone West - 3022	H11M-05. Utilizing LiDAR Datasets From Experimental Watersheds to Advance Ecohydrological Understanding in Seasonally Snow-Covered Forests (<i>Invited</i>) HARPOLD, A.A.; BROXTON, P.D.; GUO, Q.; BARLAGE, M.; GOCHIS, D.	Boulder/ Jemez/ and Southern Sierra
10:35 - 10:50 AM	B12B. Soil Organic Matter Dynamics: Novel Techniques, Big Data, and Functional Models II Moscone West - 2002	B12B-02. Composition and mean residence time of soil organic matter eroded from temperate, forested catchments: Implications for erosion-induced carbon sequestration BERHE, A.A.; MCCORKIE, E.; STACY, E.; HART, S.; HUNSAKER, C.; JOHNSON, D.	Southern Sierra
11:20 - 11:35 PM	H12D. Large-Scale Field Experiments and Long-Term Observing Networks II Hydrology Moscone West - 3022	H12D-05-4418. Long-Term Soil Experiments: A Key to Managing Earth's Rapidly Changing Critical Zones RICHTER, D. Jr.	Calhoun
1:40 – 6:00 PM	B13E. Global Changes in the Fluxes and Reactivity of Riverine Organic Carbon from Channel to Coastal Margin Posters Moscone West - Poster Hall	B13E-0239. Salt Marsh and Phytoplankton Bloom Influences on the Composition and Metabolism of Organic Matter in a Temperate Estuary, Delaware, USA. BARNES, R.; ULLMAN, W.; AUFDENKAMPE, A.	Christina River Basin
1:40 – 6:00 PM	B13N. Soil Organic Matter Dynamics: Processes of Stabilization and Decomposition I Posters Moscone West – Poster Hall	B13N-0055. Changes in Carbon Chemistry and Stability Along Deep Tropical Soil Profiles at the Luquillo Critical Zone Observatory STONE, M.; HOCKADAY, W.; PLANTE, A.	Luquillo
1:40 - 6:00 PM	B13N. Soil Organic Matter Dynamics: Processes of Stabilization and Decomposition I Posters Moscone West – Poster Hall	B13N-0065. Quantifying Soil Organic Carbon Redistribution after Forest Fire using Thermal Analyses, Valles Caldera, New Mexico KUKLEWICZ, K.; RASMUSSEN, C.	Catalina-Jemez
1:40 - 6:00 PM	B13N. Soil Organic Matter Dynamics: Processes of Stabilization and Decomposition I Posters Moscone West – Poster Hall	B13N-0067. Effect of Combustion Temperature on Soil and Soil Organic Matter Properties: A Study of Soils from the Western Elevation Transect in Central Sierra Nevada, California	Southern Sierra

		ARAYA, S.; BERHE, A.A.	
1:40 – 6:00 PM	B13N. Soil Organic Matter Dynamics: Processes of Stabilization and Decomposition I Posters Moscone West – Poster Hall	B13N-0072. Pyrolysis-AMS Study of Age Structure of SOC in Volcanic Soils on Kohala Volcano, Hawaii GRANT, K.; GALY, V.; DERRY, L.	CZO NO
1:40 - 6:00 PM	EP13A. Hydraulic Reconstructions of Sedimentary Deposits and Landforms: Modern and Ancient II Posters Moscone South – Poster Hall	EP13A-3503. Evolution of Fine-Grained Channel Margin Deposits behind Large Woody Debris in an Experimental Gravel-Bed Flume O’NEILL, B.; MARKS, S.; SKALAK, K.; PULEO, J.; WILCOCK, P.; PIZZUTO, J.	Christina River Basin
1:40 - 6:00 PM	H13E. Advances in Representation, Integration, and Coupling of Novel Processes in Hydrologic and Transdisciplinary Models I Posters Moscone West – Poster Hall	H13E-1165. Flow and transport modeling of a tracer isotope experiment at B2 LEO using integrated and distributed multisensor observation data SCUDELER, C.; PANGLE, L.; PASETTO, D.; NIU, G-Y.; PANICONI, C.; PUTTI, M.; TROCH, P.	Catalina-Jemez
1:40 - 6:00 PM	H13G. Transformative Measurements to Understand the Geosphere: Zip-Ties, Arduinos, Novel Sensors, and Twitter Posters Moscone West – Poster Hall	H13G-1196. Open Source Hardware for DIY Environmental Sensing HICKS, S.; AUFDENKAMPE, A.; DAMIANO, S.; MONTGOMERY, D.	Christina River Basin
1:40 - 6:00 PM	PA13A. Critical Zone Science: Can Science Leadership Keep Pace with Emergent Societal Needs? Moscone South - Poster Hall	PA13A-3893. Time for Ecosystem and Geoscientists to Hybridize their Sciences RICHTER, D., Jr.; BILLINGS, S.	Calhoun
1:40 – 6:00 PM	PA13A. Critical Zone Science: Can Science Leadership Keep Pace with Emergent Societal Needs? Posters Moscone South - Poster Hall	PA13A-3894. How Deep is the Critical Zone: A Scientific Question with Potential Impact for Decision-makers in Areas of Shale-Gas Development and Hydraulic Fracturing BRANTLEY, Susan	Susquehanna
1:40 – 6:00 PM	PA13A. Critical Zone Science: Can Science Leadership Keep Pace with Emergent Societal Needs? Posters Moscone South – Poster Hall	PA13A-3895. Frontiers in Critical Zone Science: Science Advances for the Next 10 Years SILVER, Whendee	Luquillo
2:25 – 2:40 PM	B13L. Observing and Predicting Impacts from Ecological and Climatological Disturbances I Moscone West – 2003	B13L-04. Landscape Disturbance History and Belowground Carbon Dynamics MARIN-SPIOTTA, E.; SMITH, A. P.; ATKINSON, E.	Luquillo
2:25 - 2:40 PM	EP13E. Advances in Understanding Sediment Production, Erosion, and Weathering in the Critical Zone I Moscone West - 2007	EP13E-04. Testing for supply-limited chemical erosion in field measurements of soil production and chemical depletion FERRIER, K.; RIEBE, C.; HAHM, W.J.; KIRCHNER, J.	Southern Sierra
2:55 – 3:10 PM	EP13E. Advances in Understanding Sediment Production, Erosion and Weathering in the Critical Zone I Moscone West - 2007	EP13E-06. Rates of Tree Throw in Appalachian Shale Landscapes WHITE, T.; DERE, A.	Susquehanna
3:10 – 3:25 PM	H13M. Hydrologic Data Assimilation I Moscone West - 3011	H13M-07. Towards Improved High-Resolution Land Surface Hydrologic Reanalysis Using a Physically-Based Hydrologic Model and Data Assimilation (<i>Invited</i>) SHI, Y.; DAVIS, K.; ZHANG, F.; DUFFY, C.; YU, X.	Susquehanna
3:25 – 3:40 PM	EP13E. Advances in Understanding Sediment Production, Erosion, and Weathering in the Critical Zone I Moscone West 2007	EP13E-08. Age and Weathering Rate of Sediments in Small Catchments: The Role of Hillslope Erosion DOSSETO, A.; BUSS, H.; CHABAUX, F.	Luquillo

4:00 – 4:15 PM	B14A. New Mechanisms, Feedbacks, and Approaches for Improving Predictions of the Global Carbon Cycle in Earth System Models I Moscone West – 2002	B14A-01. Modeling Tropical Forests: Challenges and Opportunities REED, S.; URIARTE, M.; WOOD, T.; CAVALERI, M.; LUGO, A.	Luquillo
4:45 – 5:00 PM	A14B. Fog: Atmosphere, Biosphere, Land, and Ocean Moscone West - 3006	A14B-04. Using redwood tree ring chronologies to obtain the long-view on California's coastal climate DAWSON, T.; VOELKER, S.; AMBROSE, A.	Eel
4:45 – 5:00 PM	EP14A. Deciphering Isotope Signatures of Earth Surface and Critical Zone Processes I Moscone West - 2007	EP14A-04. Using Measurements of Multiple Isotopes in One Setting to Understand Critical Zone Processes Occurring over Different Timescales (<i>Invited</i>) BRANTLEY, Susan	Susquehanna
5:00 – 5:15 PM	E14A. Deciphering Isotope Signatures of Earth Surface and Critical Zone Processes I Moscone West – 2007	E14A-05. Molybdenum Isotope Fractionation in the Critical Zone PETT-RIDGE, J.; SIEBERT, C.; OPFERGEIT, S.; BURTON, K.; HALLIDAY, A.	Luquillo
5:00 – 5:15 PM	EP14B. The Imprint of Past Climate Change on Landscapes I Moscone West – 2005	EP14B-05. The Tool-size Effect: Old Weathered Soils Limit the Erosive Power of Bedrock Streams WILLENBRING, J.; BROCARD, G.	Luquillo
Tuesday, December 16, 2014			
8:00 – 12:20 PM	B21F. Nitrous Oxide Emissions at Ecosystem to Global Scales: Processes, Measurement, and Modeling II Posters Moscone West – Poster Hall	B21F-0111. Soil Greenhouse Gas Flux Measurements with Automated and Manual Static Chambers, Forced Diffusion Chamber, and Concentration Profiles RUAN, L.; OIKAWA, P.; CELI, M.; VERFAILLIE, J.; SILVER, W.; et al.	Luquillo
8:00 – 12:20 PM	B21H. The Bio-Atmospheric N Cycle: N Emissions, Transformations, Deposition, and Terrestrial and Aquatic Ecosystem Impacts III Posters Moscone West – Poster Hall	B21H-0168. Climatic and Grazing Controls on Biological Soil Crust Nitrogen Fixation in Semi-arid Ecosystems SCHWABEDISSEN, S.; REED, S.; MAGNUSON, T.; LOHSE, K.	RC CZO
8:45 - 9:00 AM	B21J. Soil Organic Matter Dynamics: Processes of Stabilization and Decomposition II Moscone West - 2002	B21J-04. Soil Mineralogy and Substrate Quality Effects on Microbial Priming FINLEY, B.K.; RASMUSSEN, C.; DIJKSTRA, P.; SCHWARTZ, E.; MAU, R.; LIU, X-J.; HUNGATE, B.	Catalina-Jemez
9:00 - 9:15 AM	B21J. Soil Organic Matter Dynamics: Processes of Stabilization and Decomposition II Moscone West - 2002	B21J-05. Guiding Empirical and Theoretical Explorations of Organic Matter Decay By Synthesizing Temperature Responses of Enzyme Kinetics, Microbes, and Isotope Fluxes BILLINGS, S.; BALLANTYNE, F.; LEHMEIER, C.; MIN, K.	Calhoun
9:15 – 9:30 AM	B21J. Soil Organic Matter Dynamics: Processes of Stabilization and Decomposition II Moscone West - 2002	B21J-06. Fe-C Interactions and Soil Organic Matter Stability in Two Tropical Soils of Contrasting Parent Materials COWARD, E.; THOMPSON, A.; PLANTE, A.	Calhoun/ Luquillo
10:20 - 10:35 AM	B22A. Forests and Drought Vulnerability and Resilience, Past, Present, and Future II Moscone West - 2003	B22A-01. Rapid Water Uptake and Limited Storage Capacity at Height of Growing Season in Four Temperate Tree Species in a Central Pennsylvania Catchment GAINES, K.; MEINZER, F.; DUFFY, C.; THOMAS, E.; EISENSTAT, D.	Susquehanna

10:20 - 10:35 AM	EP22B. Critical Zone Research as an Incubator for Interdisciplinary Cross-Site, Process-Oriented Science I Moscone West - 2005	EP22B-01. Developing a Paradigm to Measure and Model the Form and Function of the Critical Zone (<i>Invited</i>) BRANTLEY, Susan	Susquehanna
10:35 - 10:50 AM	EP22B. Critical Zone Research as an Incubator for Interdisciplinary Cross-Site, Process-Oriented Science I Moscone West - 2005	EP22B-02 Hillslope lowering rates and mobile-regolith residence times from <i>in situ</i> and meteoric ¹⁰ Be analysis: Boulder Creek Critical Zone Observatory, Colorado FOSTER, M.; ANDERSON, R.; WYSHNYTZKY, C.; OUIMET, W.; DETHIER, D.	Boulder Creek
10:50 - 11:05 AM	EP22B. Critical Zone Research As an Incubator for Interdisciplinary, Cross-Site, Process-Oriented Science I Moscone West - 2005	EP22B-03. Linking Weathering, Rock Moisture Dynamics, Geochemistry, Runoff, Vegetation and Atmospheric Processes through the Critical Zone: Graduate Student led Research at the Eel River Critical Zone Observatory DIETRICH, W.E.	Eel
11:05 - 11:20 AM	EP22B. Critical Zone Research As an Incubator for Interdisciplinary, Cross-Site, Process-Oriented Science I Moscone West - 2005	EP22B-04. Co-evolution of Climate, Soil, and Vegetation and their interplay with Hydrological Partitioning at the Catchment Scale (<i>Invited</i>) ZAPATA-RIOS, X.; BROOKS, P.; TROCH, P.; MCINTOSH, J.	Catalina-Jemez
11:35 - 11:50 AM	B22C. Soil Organic Matter Dynamics: Processes of Stabilization and Decomposition III Moscone West - 2002	B22C-06. Interactions of landscape position, stream flow, and litter quality on litter decomposition in intermittent to ephemeral streams in the American Southwest LOHSE, K.; SCHWABEDISSEN, S.; GALLO, E.; MEIXNER, T.	Catalina-Jemez
12:05 - 12:20 PM	EP22B. Critical Zone Research As an Incubator for Interdisciplinary, Cross-Site, Process-Oriented Science I Moscone West - 2005	EP22B-08. Linking CZO, LTER, and NEON-Putting Biology into the Critical Zone MCDOWELL, William	Luquillo
12:30 – 1:30 PM	TH23F. TOWN HALL Moscone West - 2005	TH23F. Critical Zone Observatories: Past Present, Future WHITE, Tim; DERRY, Louis	CZO NO
1:40 - 6:00 PM	B23E. Observing and Predicting Impacts from Ecological and Climatological Disturbances III Posters Moscone West – Poster Hall	B23E-0247. Altitudinal Contrasts in Drought-Driven Aeolian Microbial Inputs to Montane Soil Ecology: Impacts of a 500-Year Drought in the Sierra Nevada, California ARONSON, E.; CAREY, C.; RIEBE, C.; ACIEGO, S.; HART, S.	Southern Sierra
1:40 - 6:00 PM	EP23B. Critical Zone Research As an Incubator for Interdisciplinary, Cross-Site, Process-Oriented Science II Posters Moscone South – Poster Hall	EP23B-3590. Impact of Wildfire on Microbial Biomass in Critical Zone Observatory MURPHY, M.; FAIRBANKS, D.; CHOROVER, J.; GALLERY, R.; RICH, V.	Catalina-Jemez
1:40 - 6:00 PM	EP23B. Critical Zone Research As an Incubator for Interdisciplinary, Cross-Site, Process-Oriented Science II Posters Moscone South – Poster Hall	EP23B-3591. Impact of fire, landscape position, aspect, and soil depth on microbial extracellular enzyme activities in the Jemez River Basin Critical Zone Observatory. FAIRBANKS, D.; MURPHY, M.; FROST, G.; CHOROVER, J.; GALLERY, R.; RICH, V.	Catalina-Jemez
1:40 - 6:00 PM	EP23B. Critical Zone Research As an Incubator for Interdisciplinary, Cross-Site, Process-Oriented Science II Posters Moscone South – Poster Hall	EP23B-3592. Soil Inorganic Carbon Formation: Can Parent Material Overcome Climate? STANBERRY, C.; WILL, R.M.; SEYFRIED, M.S.; BENNER, S.G.; FLORES, A.N.; GUILINGER, J.; LOHSE, K.A.; GOOD, A.; BLACK, C.; PIERCE, J.L.	RC CZO

1:40 - 6:00 PM	EP23B. Critical Zone Research As an Incubator for Interdisciplinary, Cross-Site, Process-Oriented Science II Posters Moscone South – Poster Hall	EP23B-3593. Parallel observations of groundwater and stream water chemistry through the critical zone: new insight into the concentration-discharge relationships KIM, H.; DIETRICH, W.E.; BISHOP, J.; FUNG, I.	Eel
1:40 - 6:00 PM	EP23B. Critical Zone Research As an Incubator for Interdisciplinary, Cross-Site, Process-Oriented Science II Posters Moscone South – Poster Hall	EP23B-3594. Probing Subsurface and Stream Particle Composition Through Optical Analysis at the Eel River Critical Zone Observatory NGHIEM, A.; THURNHOFFER, B.; BISHOP, J.; KIM, H.	Eel
1:40 - 6:00 PM	EP23B. Critical Zone Research As an Incubator for Interdisciplinary, Cross-Site, Process-Oriented Science II Posters Moscone South – Poster Hall	EP23B-3595. Spatial Heterogeneity of Stream Water Chemistry in the Elder Creek Catchment at the Eel River Critical Zone Observatory THURNHOFFER, B.; LOVILL, S.; NGHIEM, A.; KIM, H.; BISHOP, J.	Eel
1:40 - 6:00 PM	EP23B. Critical Zone Research As an Incubator for Interdisciplinary, Cross-Site, Process-Oriented Science II Posters Moscone South – Poster Hall	EP23B-3597. The effects of rock type and landscape position on solution chemistry of soils in the Biosphere 2 Desert Site of the Santa Catalina Mountains Critical Zone Observatory PENPRASE, S.; ABRAMSON, N.; LASHARR, K.; CHOROVER, J.	Catalina-Jemez
1:40 – 6:00 PM	EP23B. Critical Zone Research As an Incubator for Interdisciplinary, Cross-Site, Process-Oriented Science II Posters Moscone South – Poster Hall	EP23B-3598 Modeling three-dimensional topographic stress and its effects on bedrock fractures MOON, S.; ST.CLAIR, J.; PERRON, J.T., MARTEL, S.; HOLBRROK, W.S.; SINGHA, K.	Boulder Creek
1:40 – 6:00 PM	EP23B. Critical Zone Research As an Incubator for Interdisciplinary, Cross-Site, Process-Oriented Science II Posters Moscone South - Poster Hall	EP23B-3599 Investigating the influence of subsurface heterogeneity on chemical weathering in the critical zone using high resolution reactive transport models PANDEY, S.; RAJARAM, H.	Boulder Creek
1:40 – 6:00 PM	EP23B. Critical Zone Research As an Incubator for Interdisciplinary, Cross-Site, Process-Oriented Science II Posters Moscone South - Poster Hall	EP23B-3600. The role of run-of-river impoundments in CO ₂ and CH ₄ emissions from floodplains of the Delaware Piedmont, Christina River Basin Critical Zone Observatory PEARSON, A.; PIZZUTO, J.; VARGAS, R.	Christina River Basin
1:40 – 6:00 PM	EP23B. Critical Zone Research As an Incubator for Interdisciplinary, Cross-Site, Process-Oriented Science II Posters Moscone South - Poster Hall	EP23B-3601. Systematic Investigation of REE Mobility and Fractionation During Continental Shale Weathering Along a Climate Gradient JIN, L.; MA, L.; DERE, A.; WHITE, T.; BRANTLEY, S.	Susquehanna
1:40 – 6:00 PM	EP23E. Using Biogeochemical Tracers to Measure Mass and Energy Fluxes in the Critical Zone Posters Moscone South - Poster Hall	EP23E-3631 Using Opposing Slope Aspects to Understand Water and Energy Flow Controls on Critical Zone Architecture ANDERSON, S.; BARNHART, K.; KELLY, P., FOSTER, M.; LANGSTON, A.	Boulder Creek
1:40 - 6:00 PM	EP23E. Using Biogeochemical Tracers to Measure Mass and Energy Fluxes in the Critical Zone Posters Moscone South - Poster Hall	EP23E-3632. Does Be ¹⁰ Underestimate Residence Time of Critical Zones in Acid Environments? RICHTER, D., Jr., BACON, A.R.	Calhoun
1:40 – 6:00 PM	EP23E. Using Biogeochemical Tracers to Measure Mass and Energy Fluxes in the Critical Zone Posters Moscone South - Poster Hall	EP23E-3634. The Interplay of Regolith Evolution and Watershed Hydrodynamics on Shale Weathering Fluxes SULLIVAN, P.; HYNEK, S.; SINGHA, K.; WHITE, T.; GU, X.; DUFFY, C.; BRANTLEY, S.	Susquehanna

1:40 – 6:00 PM	EP23E. Using Biogeochemical Tracers to Measure Mass and Energy Fluxes in the Critical Zone Posters Moscone South - Poster Hall	EP23E-3636. Chemical Signals of Critical Zone Processing: Quantification of Water and Sediment Sources During Individual Storm Events in the Christina River Critical Zone Observatory KARWAN, D.; AUFDENKAMPE, A.; AALTO, R.; LAZAREVA, O.; MARQUARD, J.; PIZZUTO, J.; SAWYER, A.	Christina River Basin
1:40 – 6:00 PM	EP23E. Using Biogeochemical Tracers to Measure Mass and Energy Fluxes in the Critical Zone Posters Moscone South - Poster Hall	EP23E-3637. Ge/Si, Ca/Sr and ⁸⁷ Sr/ ⁸⁶ Sr tracers of biogeochemical sources and cycling of Si and Ca at the Shale Hills CZO DERRY, L.; MEEK, K.; SPARKS, J.	Susquehanna
1:40 - 6:00 PM	V23A. Achieving Negative Carbon Emissions: Distributed Carbon Capture from Air and Surface Water Using Geologic Materials and/or Storage Reservoirs II Posters Moscone South – Poster Hall	V23A-4778. Rapid CO ₂ consumption during incipient weathering of a granular basaltic hillslope in the Landscape Evolution Observatory, Biosphere 2 RUIZ, J.; VAN HAREN, J.; DONSTOVA, K.; BARRON-GAFFORD, G.; TROCH, P.; CHOROVER, J.	Catalina-Jemez
Wednesday, December 17, 2014			
8:00 - 12:20 PM	B31E. Feedbacks Among Geomorphology, Hydrology, and Biology Across Terrestrial and Aquatic Ecosystems Moscone West - Poster Hall	B31E-0062. Ordering interfluvies: a simple proposal for understanding critical zone evolution and function. BRECHEISEN, Z.; RICHTER, Jr.; D.	Calhoun
8:00 - 12:20 PM	ED31A. Challenges and Approaches to Running Effective Undergraduate Research Experiences in the Geosciences I Posters Moscone South - Poster Hall	ED31A-3426. Attracting Students Into Science: Insights From a Summer Research Internship Program for Community College Students in Colorado ANDERSON, S.; SMITH, L.; GOLD, A.; BATCHELOR, R.; MONDAY, BARBARA	Boulder Creek
8:00 – 12:20 PM	ED31C. Solutions and Strategies for Fostering GeoEthics and Enhancing the Geosciences Section Posters Moscone South – Poster Hall	ED31C-3446. GeoEthics from the Ground Up: A Carbon-Neutral Education MOORE, A.; DERRY, L.	CZONO
8:00 – 12:20 PM	ED31F. Undergraduate Earth, Atmospheric, Ocean, and Space Science Research and Outreach Showcase Posters Moscone South - Poster Hall	ED31F-3481. Elucidating the Effects of Dam Restoration on Hydrologic Patterns in Streams and Tributaries CAIN, M.; RUSSO, T.; SULLIVAN, P.; NEAL, A.	Susquehanna
8:00 – 12:20 PM	EP31C. Ecogeomorphology: Feedbacks Between Biota and Sediment Transport at the Earth Surface I Posters Moscone South – Poster Hall	EP31C-3579. Form Follows Function: Can Tropical Mountain Forest Competition Drive the Growth of Topography? BROCARD, G.; WILLENBRING, J.; SCATENA, F.	Luquillo
8:00 – 12:20 PM	EP31D. Morphodynamics of Bedrock-Alluvial Rivers I Posters Moscone South – Poster Hall	EP31D-3585. The Threshold of Motion Filters Extreme Climatic Fluctuations in Gravel Bedded Alluvial and Bedrock Rivers Resulting in Near-Threshold and Transported-Limited Systems PHILLIPS, C.; JEROLMACK, D.; WILLENBRING, J.	Luquillo
8:00 – 12:20 PM	H31E. Hydrogeophysical Characterization of the Critical Zone Posters Moscone West - Poster Hall	H31E-0665. The Evolution of Soil Hydrological and Physical Properties under the Impact of Mineral Weathering and Organic Matter Sequestration TAN, F.; LUNN, E.; FISHER, B.; YOO, K.; IMHOFF, P.; MICHAEL, H.	Christina River Basin

8:00 - 12:20 PM	H31E. Hydrogeophysical Characterization of the Critical Zone Posters Moscone West - Poster Hall	H31E-0668 Defining the base of the Critical Zone: Stress, Topography, Fracture Permeability ST.CLAIR, J.; MOON, S.; HOLBROOK, W.S.; PERRON, J.T.; MARTEL, S.; SINGHA, K.	Boulder Creek
8:00 – 12:20 PM	H31E. Hydrogeophysical Characterization of the Critical Zone Posters Moscone West - Poster Hall	H31E-0670. Using Hydrogeophysical Methods to Understand the Spatial Distribution of the Bedrock-regolith Interface in the Rio Icacos Watershed (Luquillo Critical Zone Observatory, Puerto Rico). COMAS, X.; WRIGHT, W.; HYNEK, S.; ORLANDO, J.; BUSS, H.; BRANTLEY, S.	Susquehanna/ Luquillo
8:00 - 12:20 PM	H31F. Cryptic Wetlands and Incognito Streams: Connectivity of Headwaters to Downstream Receiving Waters and Impacts on Water Quality and Ecological Functions I Posters Moscone West - Poster Hall	H31F-0673 Groundwater Contributions to Intermittent Streamflow in a Headwater Catchment: How do Geoclimatic Controls Influence Downstream Water Quality? SMULL, E.; GOOSEFF, M.; SINGHA, K.	Boulder Creek
8:00 - 12:20 PM	H31G. Ecohydrology in a Changing Environment I Posters Moscone West – Poster Hall	H31G-0686. Analytical arrival and persistence time distributions for flow thresholds in seasonally dry climates DRALLE, D.; THOMPSON, S.	Eel
8:00 - 12:20 PM	H31G. Ecohydrology in a Changing Environment I Posters Moscone West – Poster Hall	H31G-0690. Potential effects of tree-to-shrub type conversion on streamflow in California's Sierra Nevada BAGUSKAS, S.; BART, R.; MOLINARI, N.; TAGUE, C.N.; MORITZ, M.	Southern Sierra
8:00 - 12:20 PM	H31G. Ecohydrology in a Changing Environment I Posters Moscone West – Poster Hall	H31G-0691. Using the landscape evolution modelling framework Landlab to quantify how soils, climate, and vegetation are linked in semi-arid landscapes GELB, L.; FLORES, A.; YAGER, E.; PIERCE, J.	RC CZO
8:00 - 12:20 PM	H31I. Hydrologic Connectivity: Linking Terrestrial and Aquatic Systems Across Space and Time Posters Moscone West - Poster Hall	H31I-0753. The Roles of Groundwater Flowpaths and Stream Network Expansion in Landscape Connectivity and Resulting Runoff and Solute Dynamics in an Ephemeral Piedmont Catchment ZIMMER, M.; MCGLYNN, B.	Calhoun
8:00 - 12:20 PM	IN31D. The Brokering Approach, Information Models, and Interchange Formats for Geoscience Data Posters Moscone South – Poster Hall	IN31D-3753. Development of an Information Exchange format for the Observations Data Model version 2 using OGC Observations and Measures VALENTINE, D.; HORSBURGH, J.; AUFDENKAMPE, A.K.; LEHNERT, K.; MAYORGA, LE.; HSU, L.; SONG, L.; ZASLAVSKY, I.; WHITENACK, T.	National CZO Data
8:45 - 9:00 AM	B31L. Soil Organic Matter Dynamics: Novel Techniques, Big Data, and Functional Models III Moscone West – 2002-2024	B31L-04. Interactive control of minerals, wildfire, and erosion on soil carbon stabilization in conifer ecosystems of the western U.S. (<i>Invited</i>) RASMUSSEN, C.	Catalina-Jemez
10:35 - 10:50 AM	EP32B. From Rock to Rolling Regolith: Advances in Hillslope Geomorphology Moscone West - 2010	EP32B-02. Critical zone evolution at the hillslope scale REMPE, D., DIETRICH, W.E.; OSHUN, J.; DAWSON, T.	Eel
10:50 - 11:05 AM	B32D. Ideas in Terrestrial Biogeochemistry: Tell the Story I Moscone West - 2008	B32D-03. Cracking the Code of Soil Genesis. The Early Role of Rare Earth Elements ZAHARESCU, D.; DONTSOVA, K.; BURGHELEA, C.; MAIER, R.; HUXMAN, T.; CHOROVER, J.	Catalina-Jemez

10:50 - 11:05 AM	EP32B. From Rock to Rolling Regolith: Advances in Hillslope Geomorphology I Moscone West - 2010	EP32B-03 Chilly Hilly- coupling models of landscape evolution and subsurface thermal processes BARNHART, K.; ANDERSON, R.	Boulder Creek
11:20 - 11:35 AM	B32D. Climate induced changes to soil structure can alter biogeochemical cycling of carbon Moscone West - 2008	B32D-05. Climate induced changes to soil structure can alter biogeochemical cycling of carbon GHEZZEHEI, T.; ARNOLD, C.; BERHE, A.A.	Southern Sierra
11:35 - 11:50 AM	B32E. Soil Organic Matter Dynamics: Processes of Stabilization and Decomposition IV Moscone West - 2003	B32E-06. Contemporary Subsoil Carbon Accumulation During Reforestation is Conditioned by Long-term, Coupled C-Fe Cycling in Upland Soils. BACON, A.R.; RICHTER, Jr.; D.	Calhoun
11:35 - 11:50 AM	EP32B. From Rock to Rolling Regolith: Advances in Hillslope Geomorphology I Moscone West - 2010	EP32B-06. Hillslope Response to Differences in Aspect-Related Microclimate (<i>Invited</i>) WEST, N.; KIRBY, E.	Susquehanna
12:30 – 1:30 PM	TH33F. TOWN HALL Moscone West -2007	TH33F. The BiG CZ Software System for Integration and Analysis of Bio- and Geoscience (BIG) Data in the Critical Zone (CZ) AUFDENKAMPE, A.; MAYORGA, E.; HORSBURGH, J.; ZSLAVSKY, I.	National CZO Data
1:40 – 6:00 PM	EP33B. From Rock to Rolling Regolith: Advances in Hillslope Geomorphology II Posters Moscone South - Poster Hall	EP33B-3635. Using Shallow Seismic Tomography to Characterize Patterns of Near-surface Weathering and the Mobile-immobile Regolith Transition: Implications for the Erodibility and Morphology of Hillslopes CLARKE, B.; KIRBY, E.; BURBANK, D.; WEST, N.	Susquehanna
1:40 - 6:00 PM	EP33B. From Rock to Rolling Regolith: Advances in Hillslope Geomorphology II Posters Moscone South – Poster Hall	EP33B-3643. Controls on the Mean Spacing of Channels on Incised Alluvial Terraces in the Western U.S. MCGUIRE, L.; PELLETIER, J.	Catalina-Jemez
1:40 - 6:00 PM	EP33B. From Rock to Rolling Regolith: Advances in Hillslope Geomorphology II Posters Moscone South – Poster Hall	EP33B-3649. Production of mineral surface area within deep weathering profiles at eroding vs. depositional hillslope locations: Christina River Basin Critical Zone Observatory FISHER, B.; YOO, K. AUFDENKAMPE, A.; NATER, E.	Christina River Basin
1:40 - 6:00 PM	GC33A. Climatology and Trends of Extreme Events in Climate Models Capable of Resolving Regional-Scale Processes II Posters Moscone West – Poster Hall	GC33A-0497. Representing surface and subsurface hydrology at hyperresolution for Earth system models: Development of a hybrid 3-D approach HAZENBERG, P.; BROXTON, P.; BRUNKE, M.; GOCHIS, D.; LAWRENCE, D.; NIU, G-Y.; PELLETIER, J.; TROCH, P.; ZENG, X.	Catalina-Jemez
1:40 - 6:00 PM	GC33D. The Role of Fire in the Earth System: Understanding Drivers, Feedbacks, and Interactions with the Land and Atmosphere Toward Improved Fire Management III Posters Moscone West – Poster Hall	GC33D-0543. Discriminating Natural Variation from Legacies of Disturbance in Semi-Arid Forests, Southwestern USA SWETNAM, T.; LYNCH, A.; FALK, D.; YOOL, S.; GUERTIN, D.	Catalina-Jemez
3:05 - 3:20 PM	H33L. Ecohydrology in a Changing Environment II Moscone West - 3022	H33L-06. Water use efficiency variability and controls across ten California ecosystems KELLY, A.; GOULDEN, M.	Southern Sierra
3:25 – 3:40 PM	H330. Methods and Theories for Anomalous Transport at Multiple Scales II Moscone West- 2005	H330-08. Granular Controls on the Dispersion of Bed Load Tracers JEROLMACK, D.; MARTIN, R.; PHILLIPS, C.	Luquillo

5:00 - 5:15 PM	EP34A. Ecogeomorphology: Feedbacks Between Biota and Sediment Transport at the Earth Surface III Moscone West - 207	EP34A-05 Gopher eskers, mounds, and stonelines: Evidence of the annual to centennial impacts of gophers in the montane meadows of Colorado's Front Range WINCHELL, E.; LOMBARDI, E.; MARQUEZ, J.; DOAK, D.; ANDERSON, R.	Boulder Creek
Thursday, December 18, 2014			
8:00 - 12:20 PM	A41B. Improved Understanding of the Surface Energy Balance and the Spatiotemporal Variation of Its Components II Posters Moscone South - Poster Hall	A41B-3022. Re-Evaluation of the Earth's Surface Energy Balance Using a New Method of Heat Fluxes HUANG, S-Y.; DENG, Y.; WANG, J.	Calhoun
8:00 - 12:20 PM	B41C. Biosphere-Atmosphere Greenhouse Gas Fluxes in Terrestrial Ecosystem IV Posters Moscone West - Poster Hall	B41C-0081. Diel Patterns of Soil Respiration in a Moist Subtropical Forest: Key Drivers and Future Research Needs GUTIÉRREZ del ARROYO, O.; WOOD, T.	Luquillo
8:00 - 12:20 PM	EP41B. High-Resolution Topography and Process Measurements for Analyzing Earth-Surface Dynamics I Posters Moscone South - Poster Hall	EP41B-3519. Quantifying Geomorphic Change to a Point Bar in Response to High Flow Events Using Terrestrial LiDAR, White Clay Creek, Delaware OREFICE, M.; O'NEAL, M.; PIZZUTO, J.	Christina River Basin
8:00 - 12:20 PM	IN41A. Cyberinfrastructure for Field Work: Data Standards, Computer Applications, Instrumentation, and Best Practices I Posters Moscone South - Poster Hall	IN41A-3649. The community-driven BiG CZ software system for integration and analysis of bio- and geoscience data in the critical zone AUFDENKAMPE, A.; MAYORGA, E.; HORSBURGH, J.; LEHNERT, K.; ZASLAVSKY, I.; VALENTINE, D.; RICHARD, S.; CHEETHAM, R.; MEYER, F.; HENRY, C.; BERG-CROSS, G.; PACKMAN, A.; ARONSON, E.	National CZO Data
9:15 - 9:30 AM	H41H. Characterizing Hydrological and Linked Processes in Arid and Semi-Arid Regions I Moscone West - 3016	H41H-06. A dynamical study on sodium accumulation and soil reclamation in secondary salinization MAU, Y.; PORPORATO, A.	Calhoun
9:30 - 9:45 AM	H41H. Characterizing Hydrological and Linked Processes in Arid and Semi-Arid Regions I Moscone West - 3016	H41H-07. A two-layer soil moisture conceptual framework for exploring land surface-atmosphere interactions in water-limited ecosystem PAPUGA, S.	Catalina-Jemez
10:20 - 12:20 PM	H42C. Critical Zone in the Anthropocene I Moscone South - 302	H42C. Critical Zone in the Anthropocene I. Thanos Papanicolaou; Amilcare Porporato; Daniel Richter Jr., Praveen Kumar (Conveners)	Calhoun
10:20 - 10:35 AM	H42C. Critical Zone in the Anthropocene I Moscone South - 302	H42C-01. Irrigation and Fertilization Controls on Critical Zone Carbon and Nitrogen cycles in Harvested Ecosystems PAROLARI, A.; KATUL, G.; PORPORATO, A.	Calhoun
10:35 - 10:50 AM	H42C. Critical Zone in the Anthropocene I Moscone South - 302	H42C-02. In-stream Nitrate Responses Integrate Human and Climate Systems in an Intensively Managed Landscape (<i>Invited</i>) WARD, A.; DAVIS, C.; BURGIN, A.; LOECKE, T., et. al.	IML
10:50 - 11:05 AM	H42C: Critical Zone in the Anthropocene I Moscone South - 302	H42C-03. Assessing the Impact of Landscape Evolution on Carbon Dynamics: A Coupled Physically-Based Modelling Approach. DIALYNAS, Y.; BASTOLA, S.; BILLINGS, S.; BRAS, R.	Calhoun
11:05 - 11:20 AM	H42C. Critical Zone in the Anthropocene I Moscone South - 302	H42C-04. Potential Carbon Transport: Linking Soil Aggregate Stability and Sediment Enrichment for Updating the Soil Active Layer within Intensely	IML

		Managed Landscapes WACHA, K.; PAPANICOLAOU, T.; ABBAN, B.; WILSON, C.	
11:20 - 11:35 AM	H42C. Critical Zone in the Anthropocene I Moscone South - 302	H42C-05. The Cascade of Non-Stationarity (Invited) BELMONT, P.; KUMARASAMY, K.; KELLY, S. A.; SCHAFFRATH, K.; BEACH, T.	IML
11:50 - 12:05 PM	H42C. Critical Zone in the Anthropocene I Moscone South - 302	H42C-07. Tracing suspended sediment sources in the Upper Sangamon River Basin using fingerprinting techniques YU, M.; RHOADS, B.; NEAL, C.; ANDERS, A.	IML
12:05 - 12:20 PM	H42C: Critical Zone in the Anthropocene I Moscone South - 302	H42C-08. Understanding the Variations in Flood Responses to Tropical-Storms and Hurricanes KUMAR, M.; CHEN, X.; MCGLYNN, B.	Calhoun
1:40 - 6:00 PM	B43E. Land-Use and Land-Cover Change: Detecting, Modeling, and Its Effects on Water, Energy, and Biogeochemical Dynamics at Various Temporal and Spatial Scales II Posters Moscone West – Poster Hall	B43E-0289. Preliminary Analysis of Historical Water Quality in the Tidal Christina River, Delaware CHRISTIE, M.; MARTIN, R.; PIZZUTO, J.	Christina River Basin
1:40 - 6:00 PM	C43A. Modeling of the Cryosphere II Posters Moscone West – Poster Hall	C43A-0365. Snowmelt sensitivity to warmer temperatures: a field-validated model analysis, southern Sierra Nevada, California MUSSELMAN, K.; MOLOTCH, N.; MARGULIS, S.	Southern Sierra
1:40 - 6:00 PM	C43D. Recent Advances in Monitoring, Measuring, and Modeling Snow Processes II Posters Moscone West – Poster Hall	C43D-0412. Optimization of Sensor Placements Using Machine Learning and LIDAR data: a Case Study for a Snow Monitoring Network in the Sierra Nevada OROZA, C.; ZHENG, Z.; GLASER, S.; BALES, R.; CONKLIN, M.	Southern Sierra
1:40 - 6:00 PM	C43D. Recent Advances in Monitoring, Measuring, and Modeling Snow Processes II Posters Moscone West – Poster Hall	C43D-0417. Cross-sites analysis of snowpack depth from LiDAR in Southern Sierra Nevada ZHENG, Z.; KIRCHNER, P.; BALES, R.; GLASER, S.	Southern Sierra
1:40 – 6:00 PM	C43D. Recent Advances in Monitoring, Measuring, and Modeling Snow Processes II Posters Moscone West – Poster Hall	C43D-0434 Establishing Transferable Sub-Pixel Relationships for Estimating Snow Depth from Remotely-Sensed Snow Covered Area and Terrain Variability SCHNEIDER, D.; MOLOTCH, N.	Boulder Creek
1:40 – 6:00 PM	C43E. Snow Hydrology: Flooding, Modeling, and Vegetation Interactions II Posters Moscone West – Poster Hall	C43E-0438. The Sensitivity of Mountain Snowcovers to Temperature, Humidity, and Phase Change in a Warming Climate MARKS, D.G.; MARSHALL, H.P.; WINSTRAL, A.H.; HEDRICK, A.R.	RC CZO
1:40 - 6:00 PM	H43B. Multiscale Preferential Flow from Soils to Fissured/Karst Systems: Hydrologic, Geochemical, and Biological Implications II Posters Moscone West – Poster Hall	H43B-0964: A new stochastic hydraulic conductivity approach for modeling one-dimensional vertical flow in variably saturated porous media. VRETTAS, M.; FUNG, I.	Eel
1:40 - 6:00 PM	H43D. Critical Zone in the Anthropocene II. Moscone West - Poster Hall	H43D. Critical Zone in the Anthropocene II. Thanos Papanicolaou; Amilcare Porporato; Daniel Richter Jr., Praveen Kumar (Conveners)	Calhoun
1:40 - 6:00 PM	H43D. Critical Zone in the Anthropocene II. Moscone West - Poster Hall	H43D-0983. The Calhoun Critical Zone Observatory: Understanding the Evolution of the Critical Zone After Centuries of Anthropogenic Degradation.	Calhoun

		MALLARD, J.; RICHTER, Jr., D.; MCGLYNN, B.	
1:40 – 6:00 PM	H43D. Critical Zone in the Anthropocene II Posters Moscone South – Poster Hall	H43D-0984. Human Impact Intertwined with Glacial Legacy: Hydro-Geomorphologic Exploration Using LIDAR Data YAN, Q.; KUMAR, P.	IML
1:40 – 6:00 PM	H43D. Critical Zone in the Anthropocene II Posters Moscone South – Poster Hall	H43D-0985. Stream Channel Change in an Intensively Managed Agricultural Landscape: Implications for Critical Zone Processes RHOADS, B.; LEWIS, Q.; ANDRESEN, W.	IML
1:40 – 6:00 PM	H43D. Critical Zone in the Anthropocene II Posters Moscone South – Poster Hall	H43D-0987. A GIS-Based Framework for Examining the Effects of Water-Driven Erosion on Soil Biogeochemical Cycling ABBAN, B.; PAPANICOLAOU, T.; WACHA, K.; WILSON, C.	IML
1:40 – 6:00 PM	H43D. Critical Zone in the Anthropocene II Posters Moscone South – Poster Hall	H43D-0988. Differences in Net Ecosystem Exchange for an Intensely Managed Watershed Using a Lumped, Regional Model and a Mechanistic, Hill-slope Scale Model WILSON, C.; WACHA, K.; PAPANICOLAOU, T.; STANIER, C.; JAMROENSAN, A.	IML
1:40 – 6:00 PM	H43D. Critical Zone in the Anthropocene II Posters Moscone South – Poster Hall	H43D-0994. Sediment Budgeting and Restoration Planning in a Heterogeneous Landscape, the Root River Watershed, Southeastern Minnesota HEMMIS, J.M.; SOUFFRONT, M.; STOUT, J. C.; BELMONT, P.	IML
1:40 - 6:00 PM	H43G. Ecohydrology for Earth System Models I Posters Moscone West – Poster Hall	H43G-1027 Development of High-Resolution Regolith Thickness and Topographic Datasets for Regional/Global Land-Surface Modeling PELLETIER, J.; BROXTON, P.; HAZENBERG, P.; ZENG, X.; TROCH, P.; NIU, G-Y.; BRUNKE, M.; GOCHIS, D.	Catalina-Jemez
1:40 – 6:00 PM	H43G. Ecohydrology for Earth System Models I Posters Moscone West - Poster Hall	H43G-1032. Exploring the Influence of Topography on Belowground C Processes Using a Coupled Hydrologic-Biogeochemical Model SHI, Y.; DAVIS, K.; EISENSTAT, D.; KAYE, J.; DUFFY, C.; YU, X.; HE, Y.	Susquehanna
1:40 - 6:00 PM	H43L. Emergent Behaviors and Patterns in Catchment Water, Energy, and Carbon Balances Posters Moscone West – Poster Hall	H43L-1128. Monitoring and Modeling Water, Energy and Carbon Fluxes at the Hillslope Scale in the Landscape Evolution Observatory TROCH, P.; BARRON-GAFFORD, G.; DONTSOVA, K.; FANG, Y.; NIU, G-Y.; PANGLE, L.; TULLER, M.; VAN HAREN, J.	Catalina-Jemez
1:40 - 6:00 PM	IN43B. Frontiers in Uncertainty Quantification for Geophysical Modeling Posters Moscone South – Poster Hall	IN43B-3695 Quantification of Model Uncertainty in Modeling Mechanisms of Soil Microbial Respiration Pulses to Simulate Birch Effect ELSHALL, A.; YE, M.; NIU, G-Y.; BARRON-GAFFORD, G.	Catalina-Jemez
2:25-2:40 PM	EP43E. High-Resolution Topography and Process Measurements for Analyzing Earth-Surface Dynamics II Moscone West - 2007	EP43E-04 Observations of the Changing Spatial Patterns of Post-Wildfire Erosion and Deposition Using Terrestrial LIDAR RENGERS, F.; TUCKER, G.; MOODY, J.	Boulder Creek
4:30 – 4:45 PM	ED44C. Unlocking the Educational Value of Hydrologic Research for Development of Student-Centered, Context-Rich, Active Hydrologic Learning Experiences I Moscone South - 308	ED44C-03. Significant Learning Experiences in Ecohydrology in the Critical Zone (<i>Invited</i>) LOHSE, K.; RC CZO Research Team	RC CZO

4:45 – 5:00 PM	ED44C. Unlocking the Educational Value of Hydrologic Research for Development of Student-Centered, Context-Rich, Active Hydrologic Learning Experiences I Moscone South- 308	ED44C-04. Model My Watershed: Developing a Pipeline from Secondary School to College That Engenders Interest in Hydrologic Sciences (<i>Invited</i>) GILL, S.; AUFDENKAMPE, A.	Christina River Basin
5:00 – 5:15 PM	B44B-05. Characterizing Spatial and Temporal Variability of Hydrological and Biogeochemical Processes Across Scales II Moscone West - 2004	B44B-05. Impact of Hydrologic Variability on Nutrient Age Distribution in Intensively Managed Landscapes (<i>Invited</i>) KUMAR, P.; WOO, D.K.	IML
5:18 – 5:30 PM	IN44A. Cyberinfrastructure for Field Work: Data Standards, Computer Applications, Instrumentation, and Best Practices II Moscone West - 2020	IN44A-07. Information Requirements for Integrating Spatially Discrete, Feature-Based Earth Observations. (<i>Invited</i>) HORSBURGH, J.; AUFDENKAMPE, A.K.; LEHNERT, K.; MAYORGA, E.; HSU, L.; SONG, L.; ZASLAVSKY, I.; VALENTINE, D.	National CZO Data
5:45 – 6:00 PM	B44D-08. Variation in Dissolved Organic Matter Composition and Transport as Indicators of Ecological, Hydrological, and Watershed Processes III Moscone West - 2006	B44D-08. Making Sense of Sensors: Stream Carbon Flux Determination at the Five USGS WEBB Watersheds SHANLEY, J.; SARACENO, J.F.; DORNBLASER, M.; AULENBACH, B.; MAST, A.; CLOW, D.; et.al.	Luquillo

Friday, December 19, 2014

8:00 - 12:20 PM	B51G. Novel Approaches for Considering Vegetation Dynamics I Posters Moscone West – Poster Hall	B51G-0098. Using vegetation structure estimates derived from multi-source remote sensing to predict dynamics of a semi-arid ecosystem in the western US SHRESTHA, R.; MITCHELL, J.M.; GLENN, N.F.; FLORES, A.N.	RC CZO
8:00 - 12:20 PM	H51D. Ecohydrology in the Critical Zone I Posters Moscone West – Poster Hall	H51D-0641. Ecohydrological Implications of Contrasting Slope and Aspect in Complex Terrain SEYFRIED, M.; LINK, T.; KLOS, Z.; PATTON, N.; LOHSE, K.A.	RC CZO
8:00 - 12:20 PM	H51D. Ecohydrology in the Critical Zone I Posters Moscone West – Poster Hall	H51D-0642. Accessing Topographic Effects on Solar Radiation Distribution and Ecohydrological Processes FANG, Y.; NIU, G-Y.; TROCH, P.; PANICONI, C.; DURCIK, M.; CHOROVER, J.	Catalina-Jemez
8:00 - 12:20 PM	H51D. Ecohydrology in the Critical Zone I Posters Moscone West – Poster Hall	H51D-0643 Sensitivity of Hydrologic Partitioning to Snowpack Dynamics, Como Creek, CO BARNHART, T.; MOLOTCH, N.; HARPOLD, A.; KNOWLES, J.; ANDERSON, S.	Boulder Creek
8:00 - 12:20 PM	H51D. Ecohydrology in the Critical Zone I Posters Moscone West – Poster Hall	H51D-0646. Distribution, Transport, and Accumulation of Pyrogenic Black Carbon in Post-Wildfire Watersheds GALANTER, A.; CADOL, D.; LOHSE, K.A.	RC CZO
8:00 - 12:20 PM	H51D. Ecohydrology in the Critical Zone I Posters Moscone West – Poster Hall	H51D-0648. Controls of Parent Material and Topography on Soil Carbon Storage in the Critical Zone PATTON, N.; SEYFRIED, M.; LINK, T.; LOHSE, K.A.	RC CZO
8:00 - 12:20 PM	H51D. Ecohydrology in the Critical Zone I Posters Moscone West – Poster Hall	H51D-0649. Influence of contrasting aspect, lithology, and vegetation on saprolite genesis in complex terrain: Reynolds Creek Critical Zone Observatory KLOS, P.Z.; LINK, T.E.; DURRETT, W.; HEINSE, R.; SEYFRIED, M.S.; LEONARD, E.	RC CZO

8:00 - 12:20 PM	H51I. Interactions of Land Management, Wildfire, and Water at Multiple Scales I Posters Moscone West – Poster Hall	H51I-0724. Impacts of Wildfire on Throughfall and Stemflow Precipitation Chemistry WHITE, A.; MCINTOSH, J.; MEIXNER, T.; BROOKS, P.; CHOROVER, J.	Catalina-Jemez
8:00 –12:20 PM	H51N. Organic Carbon Dynamics of Inland Waters: Implications for Water Resources and Quality Under Climate and Land Use Change Posters Moscone West – Poster Hall	H51N-0807. Identifying the Sources of Dissolved Organic Matter in Streams Using Elemental Analysis Isotopic Ratio Mass Spectroscopy (EA-IRMS) Across a Land Use Gradient WYMORE, A.; KALBITZ, K.; DALEY, M.; KOENIG, L.; MILLER, S.; MCDOWELL, W.	Luquillo
8:00 - 12:20 PM	H51O. New Insights into Watershed Storage Dynamics Posters Moscone West – Poster Hall	H51O-0817. Three-dimensional prediction of soil physical, chemical, and hydrological properties in a forested catchment of the Santa Catalina CZO SHEPHARD, C.; HOLLERAN, M.; LYBRAND, R.; RASMUSSEN, C.	Catalina-Jemez
8:00 - 12:20 PM	H51O. New Insights into Watershed Storage Dynamics Posters Moscone West – Poster Hall	H51O-0820. On the role of spatial patterns of watershed storage in observed storage-discharge relationships. MCGLYNN, B.; JENCOS, K.; NIPPGEN, F.; EMANUEL, R.	Calhoun
8:00 - 12:20 PM	H51O. New Insights into Watershed Storage Dynamics Posters Moscone West – Poster Hall	H51O-0825. The Role of Dynamic Storage in the Response to Snowmelt Conditions in the Southwestern United States: Flux Hysteresis at the Catchment Scale DRISCOLL, J.; MEIXNER, T.; FERRÉ, T.; WILLIAMS, M.; SICKMAN, J.; MOLOTCH, N.; JEPSEN, S.	Catalina-Jemez
8:45 - 9:00 AM	EP51F. Aeolian Geomorphic, Sedimentary, and Atmospheric Processes II Moscone West - 2007	EP51F-04. Controls on Yardang Morphology: Insights from Field Measurements, Lidar Topographic Analyses, and Numerical Modeling (<i>Invited</i>) PELLETIER, J.; KAPP, P.	Catalina-Jemez
1:40 – 1:55 PM	H53K. Ecohydrology in the Critical Zone II Moscone West - 303	H53K-01. Hydrologic Response and Recovery to Prescribed Fire and Vegetation Removal in a Small Rangeland Catchment (<i>Invited</i>) FLERCHINGER, G.N.; SEYFRIED, M.S.; HARDEGREE, S.P.	RC CZO
1:40 - 6:00 PM	B53A. Advances in Observing and Scaling Surface-Atmosphere Exchange for Enhancing Long-Term Flux Networks III Posters Moscone West – Poster Hall	B53A-0164. Ecohydrological and Biophysical Controls on Carbon Cycling in Two Seasonally Snow-covered Forests CHAN, A.; BROOKS, P.; BURNS, S.; LITVAK, M.; BLANKEN, P.; BOWLING, D.	Catalina-Jemez
1:40 - 6:00 PM	EP53A. Earth and Planetary Surface Processes General Contributions Posters Moscone West – Poster Hall	EP53A-3589. Catchment Power and the Joint Distribution of Elevation and Travel Distance to the Outlet SKLAR, L.; RIEBE, C.; BELLUGI, D.; LUKENS, C.; NOLL, C.	Southern Sierra
1:40 – 6:00 PM	EP53A. Earth and Planetary Surface Processes General Contributions Posters Moscone South - Poster Hall	EP53A-3615. Connecting Grain Motion to Large-scale Fluctuations in Bed Load Transport: The Role of Collective Dynamics LEE, D.; JEROLMACK, D.	Luquillo
1:40 – 6:00 PM	EP53B. Erosion and Sediment Transport in Steep Landscapes II Posters Moscone South - Poster Hall	EP53B-3654 Exhumation By Landslide-Initiated Debris Flows in the 2013 Colorado Front Range ANDERSON, S.; ANDERSON, S.; ANDERSON, R.; SCHELLHASE, D.	Boulder Creek

1:40 – 6:00 PM	EP53C. Grain Sorting in Sediment Transport II Posters Moscone South - Poster Hall	EP53C-3673. The Contribution of Abrasion and Size-Selective Sorting to Downstream Fining in a Tropical Montane Stream SZABO, T.; MILLER, K.; JEROLMACK, D.; DOMOKOS, G.	Luquillo
1:40 - 6:00 PM	H53A. Reactive Flow and Transport at the Pore Scale: Recent Advancements and Upscaling Approaches II Posters Moscone West – Poster Hall	H53A-0843. Reactive Transport Modelling of Mineral Evolution in the Biosphere 2 Hillslope Experiment WU, R.; NIU, G-Y.; STEEFEL, C.; PANICONI, C.; CHOROVER, J.; DONTSOVA, K.; TROCH, P.	Catalina-Jemez
1:40 - 6:00 PM	H53B. Field-Scale Characterization of Hydraulic Properties II Posters Moscone West – Poster Hall	H53B-0852. Determination of specific yield of montane meadow soils, Sierra Nevada, CA LUCAS, R.; CONKLIN, M.; RICE, R.; GHEZZEHEI, T.	Southern Sierra
1:55 - 2:10 PM	H53J. Ecohydrology for Earth System Models II Moscone West - 3022	H53J-02. Soil Moisture and Vegetation Controls on Surface Energy Balance Using the Maximum Entropy Production Model of Evapotranspiration WANG, J.; PAROLARI, A.; HUANG, S-Y.	Calhoun
2:10 - 2:25 PM	H53K. Ecohydrology in the Critical Zone II Moscone South - 303	H53K-03. Reconciling stream dissolved organic matter with snowmelt-driven subsurface flowpaths in a montane, headwater catchment. <i>(Invited)</i> BARNARD, H.; BURNS, M.; MCKNIGHT, D.; GABOR, R.; BROOKS, P.	Boulder/ Catalina-Jemez
2:15 - 2:35 PM	H53I. Disturbance Hydrology: Assessing Immediate and Long-Term Impacts of Abrupt Landscape Changes on Hydrologic Processes and Function II Moscone West - 3020	H53I-03. Linking geology, climate and disturbance response in California mountain environments TAGUE, C.N.; GARCIA, E.; CHEN, X.; HECKMAN, C.	Southern Sierra
2:25 - 2:40 PM	H53K. Ecohydrology in the Critical Zone II Moscone South - 303	H53K-04. Mountain Runoff Vulnerability to Increased Evapotranspiration with Vegetation Expansion at the Southern Sierra Critical Zone Observatory GOULDEN, M.; BALES, R.	Southern Sierra
2:40 - 2:55 PM	H53J. Ecohydrology for Earth System Models II Moscone West - 3022	H53J-05. A Terrestrial Integrated Modeling System (TIMS) at a catchment scale – implications for Earth System Modeling NIU, G-Y.; FANG, Y., WU, R.; MATHIAS, A.; PANICONI, C.; TROCH, P.; ZENG, X.; CHOROVER, J.; MONSON, R.	Catalina-Jemez
2:45 – 3:05 PM	H53I. Disturbance Hydrology: Assessing Immediate and Long-Term Impacts of Abrupt Landscape Changes on Hydrologic Processes and Function II Moscone West - 3020	H53I-04 Synthesis of Concepts in Disturbance Hydrology and the Importance for Hydrologic Response to Extreme Hydroclimatic Events in the Critical Zone EBEL, B.; MIRUS, B.	Boulder Creek
2:55 – 3:10 PM	H53K. Ecohydrology in the Critical Zone II Moscone South - 303	H53K-06. Critical zone co-evolution: evidence that weathering and consequent seasonal rock moisture storage leads to a mixed forest canopy of conifer and evergreen broadleaf trees OSHUN, J.; DIETRICH, W.D.; DAWSON, T.; REMPE, D.; FUNG, I.	Eel
3:25 – 3:40 PM	ED53E. The Next Generation Science Standards: A Potential Revolution for Geoscience Education II Moscone South – 102	ED53E-08. Virtual Fieldwork and Critical Zone Observatories as Vehicles for Teaching “Three Dimensional” (NGSS) Science DUGGAN-HAAS, D.; ROSS, R.; DERRY, L.; WHITE, T.	CZONO

3:25 – 3:40 PM	H53K. Ecohydrology in the Critical Zone II Moscone South - 303	H53K-08. Ecohydrology of Greenhouse Gas Fluxes in a Temperate Estuary VARGAS, R.; MICHAEL, H.; SANCHEZ, Z.; SEYFFERTH, A.	Christina River Basin
5:30 – 5:45 PM	B54D. Iron Cycling in Terrestrial Ecosystems and Extreme Environments I Moscone South – 102	B54D-07. Iron: A Biogeochemical Engine That Drives Carbon, Nitrogen, and Phosphorus Cycling in Humid Tropical Forest Soils SILVER, W.; HALL, S.; THOMPSON, A.; YANG, W.	Luquillo
5:30 - 5:45 PM	H54A. Advances in Dryland Ecohydrology II Moscone West - 3022	H54A-07. The Coupling of Ecosystem Productivity and Water Availability in Dryland Regions (Invited) SCOTT, R.; BIDERMAN, J.; BARRON-GAFFORD, G.	Catalina-Jemez