BIOGRAPHICAL SKETCH

C. Kent Keller, Professor, School of the Environment (SoE), Washington State University

(a) Professional Preparation

Stanford University	Geology (distinction)	BS 1977
University of Waterloo	Earth Science	MS 1985
University of Waterloo	Earth Science	Ph.D. 1987

(b) Appointments, Awards

2015-2016: Visiting Professor, Global Institute for Water Security, University of Saskatchewan
2009-2011: Co-director, Center for Environmental Research, Education, and Outreach (CEREO)
2008: Fellow, Geological Society of America
2008-2009: Associate Director, School of Earth and Environmental Sciences (SEES)
2007-2008: Associate Director for Undergraduate Studies, SEES
2006-2007: Visiting Scholar, NanoGeoScience Institute, Copenhagen University
1988-Current: Assistant to Full Professor, SEES and SoE, Washington State University
1994-1995: Visiting Professor, Hydrology Program, NM Institute of Mining and Technology
1985-1987: Consulting Researcher, Sedimentary Resources Division, Saskatchewan Research Council, Saskatoon, Saskatchewan
1982-1983: Consultant, Water and Sanitation for Health Project, U.S. Agency for International Development

(c) Five key publications:

Keller, C.K., and B.D. Wood, 1993. A model for chemical weathering before the advent of vascular land plants. **Nature** 364: 223-225.

Keller, C.K., R. O'Brien, J.R. Havig, J.L Smith, B.T. Bormann, and D. Wang, 2006. Tree harvest in an experimental sand ecosystem: Plant effects on nutrient dynamics and solute generation**. Ecosystems** 9:634-646**.**

Balogh-Brunstad, Z., C.K. Keller, R.A. Gill, B.T. Bormann, and C.Y. Li, 2008. The effect of bacteria and fungi on chemical weathering and chemical denudation fluxes in pine growth experiments. **Biogoechemistry** doi: 10.1007/s/10533-008-9202.

Shi, Z., Z. Balong-Brunstad, M. Grant, J. Harsh, R. Gill, L. Thomashow, A. Dohnalkova, D. Stacks, M. Letourneau, and C. K. Keller, 2014. Cation uptake and allocation by red pine seedlings under cation-nutrient stress in a column growth experimemt. **Plant Soil** 378: 83-98.

Bellmore, R.A., J.A Harrison, J.A. Needoba, E. Brooks, and C. K. Keller, 2016. Hydrologic control of dissolved organic matter concentration and quality in a semi-arid artificially drained agricultural catchment. **Water Resour. Res**. In press.

Five other significant publications:

Selker, J., C.K. Keller, and J.T. McCord, 1999. *Vadose Zone Processes* . CRC/Lewis, 339 pp.

Keller, C.K., and Bacon, D.H., 1998. Soil respiration and georespiration distinguished by transport analyses of vadose CO_2, $^{13}CO_2$, and $^{14}CO_2$. **Global Biogeochem. Cycles** 12:361-372

Balogh-Brunstad, Z., C.K. Keller, B.T. Bormann, R. O'Brien, D. Wang, and G. Hawley, 2008. Chemical weathering and chemical denudation dynamics through ecosystem development and disturbance. **Global Biogeochem. Cycles** 22, GB1007, doi:10.1029/2007/GB002957.

Balogh-Brunstad, Z., C.K. Keller, J.T. Dickinson, F. Stevens, B.T. Bormann, and C.Y. Li 2008. Biotite weathering and nutrient uptake by ectomycorrhizal fungus, *Suillus Tomentosus,* in liquid-culture experiments. **Geochim. Cosmochim. Acta** 72:2601-2618.

Kelley, C. J., C.K. Keller, R.D. Evans, C.H. Orr, J.L Smith, and B.A. Harlow, 2013. Nitrate-nitrogen and oxygen isotope ratios for identification of nitrate sources and dominant nitrogen cycle processes in a tile-drained dryland agricultural field. **Soil Biol. Biochem**. 57: 731-738.

(d) Five examples of synergistic Activities (presently active except as noted)

1. Task Force, Long-Range Planning for WSU's Long Term Agroecological Reserve (LTAR)
2. Member, National Scientific Steering Committee, NSF-Critical Zone Observatory network
3. Core faculty, WSU IGERT-NSPIRE (Nitrogen Systems: Policy Integrated Research and Education)
4. Chair, Task Force for Reorganization of the Earth, Environmental, and Natural Resource Sciences at WSU (2008-2009)
5. Member of the Hubbard Brook Ecosystem Study, as vadose hydrologist/hydrogeochemist

(e) Collaborators

Collaborators and co-editors: R.M. Allen-King (University at Buffalo), S.W. Bailey (USDA Forest Service), Z. Balogh-Brunstad (Hartwick College), R. Bellmore (USEPA/Corvallis), D. Bezdicek (Wash. St. Univ.), J.D. Blum (Univ. Michigan), B.T. Bormann (Univ. Washington), E. Brooks (Univ. Idaho), J.T. Dickinson (Wash. St. Univ.), R.D Evans (Wash. St. Univ.), R.A. Gill (Wash. St. Univ.), M. Grant (Univ. Washington), G. Hawley (Univ. Vermont), J. Harsh (Wash. St. Univ.), J. Harrison (WSU), C. Huyck Orr, Carleton College, M.J. Hendry (Univ. Sask.), D.R. Huggins (USDA/ARS), P.B. Larson (Wash. St. Univ.), C.Y. Li (USDA Forest Service), G. Likens (Institute Ecosystem Studies), P. McDaniel (Univ. Idaho), J. Needoba (Oregon Health and Sciences University), R. O'Brien (Allegheny College), J. Osiensky (Univ. Idaho), J.L. Smith (USDA-ARS), L Thomashow (Wash. St. Univ.), S.E. Trumbore (Univ. Calif. Irvine), G. van der Kamp (Environment Canada), D. Wang (Univ. Vermont)

Graduate Advisors and Post-doc sponsors: J.A. Cherry, University of Waterloo; G. van der Kamp, Environment Canada

Thesis advisees (27 total) and Post-graduate scholar advisees (2 total). Last five years: Z. Balogh-Brunstad (Hartwick College), A. Carey (Sanborn Head Inc.), B. Moravec (Univ of Arizona.), Christopher Kelley (Dept. of Agriculture/State of Montana), Nathan Moxley (AMEC Foster Wheeler), Bryan Donaldson (WSU), Alice Dohnalkova (WSU/PNNL), Z. Shi (South China University of Technology), Michael Shaljian (WSU), Kayla Jones (WSU), Jessica Banaszak (WSU).