

CURRICULUM VITAE

University of Idaho

NAME: Boll, Jan

DATE: April 18, 2013

RANK OR TITLE: Professor

DEPARTMENT: Biological and Agricultural Engineering

OFFICE LOCATION AND CAMPUS ZIP: Mor 216, 3006

PHONE: (208) 885-6113

FAX: (208) 885-4674

E-MAIL: jboll@uidaho.edu

WEB: <http://www.uidaho.edu/cals/bae/faculty/janboll>

DATE OF FIRST EMPLOYMENT AT UI: August 26, 1996

DATE OF TENURE: June 23, 2002

DATE OF PRESENT RANK OR TITLE: June 28, 2008

EDUCATION BEYOND HIGH SCHOOL:

Degrees:

Ph.D. Agricultural and Biological Engineering, Cornell University, Ithaca, New York. 1995. Vadose Zone Hydrology/Soil and Water Engineering.

M.S. The Agricultural University of Wageningen, Department of Land and Water Use, Wageningen, The Netherlands. 1988. Land Use Planning.

M.S. Agricultural Engineering, University of Idaho, Moscow, Idaho. 1988. Soil and Water Engineering.

B.S. Cultuurtechniek A, The Agricultural University of Wageningen, Wageningen, The Netherlands. 1985. Land Use Planning.

Certificates and Licenses:

Professional Engineering (P.E.) License in State of Idaho

EXPERIENCE:

Teaching, Extension and Research Appointments:

Director, Sept. 2011-present, University of Idaho, Environmental Science & Water Resources Program.

Professor, June 2008-present, University of Idaho, Department of Biological and Agricultural Engineering, Moscow, Idaho.

Director, Waters of the West (incl. Water Resources Graduate Program), July, 2006- 2011, UI

Associate Professor, June 2002-2008, University of Idaho, Department of Biological and Agricultural Engineering, Moscow, Idaho.

Adjunct Associate Professor, 2003-present, University of Idaho, Environmental Science Program, Moscow, Idaho.

Adjunct Associate Professor, 2002-present, University of Idaho, Division of Soil and Land Resources, Moscow, Idaho.

Affiliate Professor, November 2001-present, CATIE (Centro Agronómico Tropical de Investigación y Enseñanza), Turrialba, Costa Rica.

Assistant Professor, August 1996-June 2002, University of Idaho, Department of Biological and Agricultural Engineering, Moscow, Idaho.

Post-doctoral Associate, January 1995-August 1996, Cornell University, Department of Agricultural and Biological Engineering, Ithaca, New York.

Advisor, Summer 1996, Department of Agricultural and Biological Engineering, Cornell University, Ithaca, New York, Cornell Environmental Sciences Undergraduate Research Experience (an NSF funded Research Experience for Undergraduates).

Graduate Research Assistant, September 1989-January 1995, Department of Agricultural and Biological Engineering, Cornell University, Ithaca, New York.

Instructor and Advisor, 1991-93, Department of Agricultural and Biological Engineering, Cornell University, Ithaca, New York, special projects for junior and senior undergraduate students.

Advisor, Summer 1992, Department of Agricultural and Biological Engineering, Cornell University, Ithaca, New York, Cornell Environmental Sciences Interns Program (CESIP).

Graduate Research Assistant, May 1986-May 1988, Department of Agricultural Engineering, University of Idaho, Moscow, Idaho.

TEACHING ACCOMPLISHMENTS:**Areas of Specialization:**

Hydrology, Water Quality, Vadose Zone Hydrology, Water Resources, Environmental Science

Students Advised:

Undergraduate Students: Six to completion of degree; two or three per year

Graduate Students:

Advised to completion of degree-major professor:

K. Welsh, Ph.D./WR, May 2014
T. Joyal, Ph.D./WR, December 2013
R. Sanchez-Murillo Ph.D./WR, December 2013
B. Rittenberg, M.S./WR, May 2013
A. Squires, M.S./WR, May 2013
C. Wilson, M.S./WR, May 2013
J. McAtty, M.S./PSM, May 2013
J. Williams, Ph.D./WR, May 2013
B. Maillet, M.S. (non-thesis, distance)/Env Sci, May 2013
R. Toohey, Ph.D./Env Sci, Aug 2012
A. Edstrom, M.S./WR, May 2012
A. Cernick, M.S./WR, May 2012
J. Asbill, M.S. (non-thesis, distance)/Env. Sci, August 2011
K. Fisher, M.S. (non-thesis, distance)/Env Sci., December 2011
R. Sanchez-Murillo M.S./WR, December 2010
J. Machala, M.S./WR, August 2009
M. LeBaron, M.S./EnvE, Dec 2008
B. Crabtree, M.S./BAE, August 2007
J. Newson, M.S./BAE, August 2007
N. Swiger, M.Eng (distance)/BAE, May 2007
K. Ostrowski, Ph.D./BAE, December 2007
C. Kruthaupt, M.S. (non-thesis, distance)/ Env Sci, Dec 2006
J.I. Linard, M.S./Env Sci, completed August 2003
E.S. Brooks, Ph.D./BAE, May 2003
C.S. Campbell, M.S./BAE, August 2003
C. Burke, M.S. (non-thesis, distance)/Env Sci, May 2003
X. Dai, Ph.D./BAE, May 2003
S. Parkinson, M.Eng. (distance)/BAE, December 2002
M.A. Hayes, M.S./Env Sci, September 2002
M. Sanchez, Ph.D./BAE, May 2002
K.N. Pandit, Ph.D./BAE, August 1999

Served on graduate committee:

S. Tirima, Ph.D./EnvS, May 2013
N. Estrada, M.S./EnvS, May 2013
A. Tranmer, Ph.D./Civil Engr., May 2013
M. Solomon, Ph.D./WR, August 2011
T. Watson, M.S./EnvS, May 2011
N.S. Tosakana, Ph.D./EnvS, Dec 2011
A. Schmoeger, M.S./EnvS, May 2011
E. Ottenbreit, M.S./CE-WSU, May 2011
R. Hartson, M.S./WR, May 2011
J. Jolley, M.S./WR, May 2010
M. Darrington, M.S./WR, May 2010
L. Marchant, M.S./WR, May 2010

J. Clark, M.S. (non-thesis)/CNR, May 2010
 S. Sheldon, M.S./CE, May 2008
 D. Holom, M.S. Hydrology, May 2006
 J. Wawrzynek, M.S./ Env Sci, May 2006
 J. Hubbart, Ph.D./CNR, June 2007
 S. Alkraid, M.S./BAE, August 2003
 R. Sentz, M.S./Env Sci, May 2003
 E. Glenn, M.S./Env Sci, August 2002
 M.M. Abdou, Ph.D./Soil Sci at WSU, May 2002
 S. Clayton, Ph.D./BAE, May 2002
 D. Hinson, M.S./Fish and Wildlife, May 2003
 H. Knotek, Ph.D./BAE, May 2003
 J. Murray, M.S./Env Sci, May 2002
 Z. Qureshi, Ph.D./BAE, December 2002
 T. Wilson, M.S./Hydrology, December 2003
 D. Hopster, M.S./Geol., May 2003
 S. Barndt, M.S./Env Sci, December 2000
 M. Regan, M.S./Soils, May 2000
 L. Huter, M.S./Env Sci, December 1999
 T. Renn, M.S./Env Sci, December 1999
 C. Sauer, M.S./Geol., May 1999
 J. Hutchings, Ph.D./Soils, May 1998
 S. Young, M.S./Soils, May 1998

Courses Developed/Taught:

Analysis of Phosphorus Field Data, BSYE 502, Fall 1999
 Advanced Hydrology (3 cr.), BAE 551, Fall 2006, 2008, 2010
 Environmental Science Seminar (1 cr.), EnvS 400, Spring 2012
 Fluid Mechanics of Porous Materials (3 cr.), BAE 558, Spring 1999, 2011
 Engineering for Living Systems (2 cr.), BAE 142, Fall 2009
 Environmental Hydrology, (3 cr.) BAE 450 (upgraded from BAE 351 in Fall 2004), Spring 2006, 2008, 2010, 2011
 Environmental Water Quality (3 cr.), BAE 452/552, Spring 1998, 2000, 2002, 2005, 2007, 2008, 2010
 GIS Analysis of Watershed Data, AgE 504, Spring 1998
 GIS Applications in Hydrology, AgE 499, Spring 1998
 Hydrologic Modeling for Watershed Management, BSYE 504, Fall 2001-02
 Hydrology, AgE 351/CE321, Spring 1997, Fall 1997, 1999-2000, 2002
 Interdisciplinary Water Resources Methods (3 cr.), WR 506, Fall 2007, 2009, 2011, 2012 (co-taught)
 Interdisciplinary Water Resources Projects (3 cr.), WR 507, Spring 2009 (co-taught), 2011, 2012
 Interdisciplinary Water Resources Seminar, WR 501, Fall 2007, Spring 2008, Fall 2008, 2009
 Irrigation Systems and Water Management (3 cr.), ASM 315, Fall 1996 – 2002, 2004, 2005, 2006, 2009
 Hydrologic Measurement Techniques (1 cr.), BAE 356, Fall 2002, 2004-06, 2009, 2010
 Environmental Hydrology (3 cr.), BAE 351, Fall 2002
 Hydrologic Processes & Modeling (3cr.), BAE 504, Fall 2001 (now class at WSU)
 Peer Advising, ASM/AgE/BSYE 499, Fall/Spring 1998-99
 Senior Thesis in Environmental Science (3 cr.), EnvS 497, Fall 2012
 Soil and Water Seminar, AgE/BSYE 501, Fall 97, Spring 1997-98, 2000-02
 Theoretical Aspects of Soil Erosion, AgE 502, Spring 1999

Honors and Awards:

Excellence in Interdisciplinary and Collaborative Efforts, University of Idaho, 2010
 Outstanding Faculty Award, Environmental Science Program, University of Idaho, 2005
 Nominated for USDA's National Teaching Award, 2003
 R.M. Wade Outstanding Teaching Award in College of Agriculture, 2003
 Award for Faculty Excellence as nominated by Andy Becker, 2002

Award for Faculty Excellence as nominated by Morella Sanchez, 2001
 Award for Faculty Excellence as nominated by Stephanie Hallock, 2001
 Nominated for Outstanding Advisor Award in College of Agriculture, 2000
 Nominated for R.M. Wade Outstanding Teaching Award in College of Agriculture, 1999
 Membership of Gamma Sigma Delta, Honor Society for Agriculture, 1999

Non-credit Classes, Seminars, Invited Lectures:

Non-credit classes:

Assisted as client in CS480: development of Web based Grade Information System, Fall 1997
 Senior Practicum in Environmental Science (EnvS 497), advised 3 students, Spring 1998
 Senior Design in Biological and Agricultural Engineering (AgE 479): advised 2 students who won the Engineering Expo that year, Fall 1997/Spring 1998
 Assisted as client in CS 480: development of ReGIS, Fall 2000
 Assisted with Junior Engineering, Math and Science (JEMS) Workshop, 1998-2001
 Senior Practicum in Environmental Science (EnvS 497), advised student(s), Spring 2000, 01, 03, 05, 06, 08, 09.

Invited Seminars:

"Evaluation of sediment sources and conservation practices at the watershed scale using monitoring and modeling", invited for seminar series in Civil and Environmental Engineering at Washington State University, Nov 17, 2008 (invited by Dr. Jeremy Rentz)
 "Water of the West: Development of an Interdisciplinary Water Resources Program", November 7, 2006, Interdisciplinary Colloquium Series (University of Idaho)
 "Soil Heterogeneity and the Hydrology of the Palouse Region" presented at the Fall 2005 IWRR Hydrology Seminar Series on 10/25/05 and presented at the WSU/UI Dept. of Geology Seminar Series on 11/10/05
 "GIS-based hydrologic modeling at the watershed scale" March 21, 2005 (invited by Marc Beutel at Washington State University).
 "GIS-based modeling to determine critical source areas in watersheds," March 24, 1999 (invited by Dr. John Selker, at Oregon State University).
 "Paradise Creek watershed: An education and research watershed," December 7, 2000 (invited by Watershed Advisory Board, Moscow, Idaho).
 "GIS-based distributed modeling for runoff risk assessment in the NYC watersheds," September 1996 (invited by Biosystems Engineering Department, Washington State University).
 "New York City Watershed Agricultural Program: A voluntary approach with scientific support," January 1997, Biological and Agricultural Engineering (AgE 501).
 "Evaluation of vadose zone samplers and techniques of placing them using GPR," February 1997, March 2001, Biological and Agricultural Engineering (AgE 558).
 "GIS Based Distributed Modeling for Runoff Risk Assessment," April 1997, Soil Science Department (Ag Sci 339).
 "Paradise Creek watershed: An education and research watershed," April 24, 2001 (invited by Wendy Ruchti, Education Department at University of Idaho).

Invited Lectures:

AgE/BSyE 142 (invited by Barbara Williams) "What is hydrology and water quality?"
 ASM 200 (invited by Ed Dowding) "PhD dissertation experiences"
 AgE/BSyE 142 (invited by Mark Casada) "Water"
 BSyE 457 (invited by Shulin Chen) "GIS-based Hydrologic Modeling"
 AgE 351/CE 321 (invited by Myron Molnau) "Reservoir Routing"
 AgE 351/CE 321 (invited by Myron Molnau) "Hydrologic Modeling"

SCHOLARSHIP ACCOMPLISHMENTS:**Refereed/Adjudicated Publications:****Journals (50 since coming to UI):**

- Ochoa-Cueva, P., A. Fries, P. Montesinos, J. A. Rodríguez-Díaz, and J. Boll. 2013. Spatial estimation of soil erosion risk by land cover change in the Andes of Southern Ecuador. *Land Degradation & Development*, DOI: 10.1002/ldr.2219.
- Sanchez-Murillo, R, E.S. Brooks, J. Boll, and F. Wilhelm. 2013. Ecohydrological habitat quality and steelhead (*Oncorhynchus mykiss*) in an effluent dominated stream: potential benefits of water treatment plants in streams of the Pacific Northwest impoverished by loss of marine derived nutrients. *Ecohydrology*, DOI: 10.1002/eco.1376.
- Jang, T., G. Vellidis, J.B. Hyman, E. Brooks, L.A. Kurkalova, J. Boll, and J. Cho. 2012. Model for prioritizing best management practice implementation: Sediment load reduction. *Environmental Management*, DOI: 10.1007/s00267-012-9977-4
- Al-Hamdan, O.Z., F.B. Pierson Jr, M.A. Nearing, C.J. Williams, J.J. Stone, P.R. Kormos, J. Boll and M.A. Weltz. 2012. Concentrated flow erodibility for physically-based erosion models: temporal variability in disturbed and undisturbed rangelands. *Water Resour. Res.*, 48, 7, doi:10.1029/2011WR011464, 2012
- Fuka, D.R., Z.M. Easton, E.S. Brooks, J. Boll, T.S. Steenhuis, M.T. Walter. 2012. A simple process-based snowmelt routine to model spatially distributed snow depth and snowmelt in the SWAT model. *Journal of the American Water Resources Association (JAWRA)* 1-11. DOI:10.1111/j.1752-1688.2012.00680.x
- Cosens, B., F. Fiedler, J. Boll, L. Higgins, G. Johnson, B. Kennedy, E. Strand, P. Wilson, and M. Laflin. 2011. Interdisciplinary methods in water resources. *Issues in Integrative Studies*. 29:118-143.
- Al-Hamdan, O.Z., F.B. Pierson Jr, M.A. Nearing, J.J. Stone, C.J. Williams, C.A. Moffet, P.R. Kormos, J. Boll and M.A. Weltz. 2011. Characteristics of concentrated flow hydraulics for rangeland ecosystems: implications for hydrologic modeling. *Earth Surface Processes and Landforms*, doi: 10.1002/esp.2227.
- Beall, A., F. Fiedler, J. Boll, and B. Cosens. 2011. Sustainable Water Resource Management and Participatory System Dynamics Case study: Developing the Palouse Basin Participatory Model. *Sustainability*, 3(5), 720-742; doi:[10.3390/su3050720](https://doi.org/10.3390/su3050720).
- Dijkema, R., E.S. Brooks, and J. Boll. 2011. Groundwater recharge in Pleistocene sediments overlying basalt aquifers in the Palouse Basin, USA: modeling of distributed recharge potential and identifying water pathways. *Hydrogeology Journal* 19:489-500 (DOI 10.1007/s10040-010-0695-9).
- Tosakana, N.S.P., L.W. Van Tassell, J.D. Wulforst, J. Boll, R.L. Mahler, E.S. Brooks, and S. Kane. 2010. Determinants of the Adoption of Conservation Practices by Farmers in the Northwest Wheat and Range Region. *Journal of Soil and Water Conservation* 65:6-331-341, doi:10.2489/jswc.65.6.331.
- Brooks, E.S., J. Boll, A. Snyder, K.M. Ostrowski, S.L. Kane, J.D. Wulforst, L.W. Van Tassell, and R. Mahler. 2010. Long term sediment loading trends in the Paradise Creek Watershed. *Journal of Soil and Water Conservation* 65:6-331-341, doi:10.2489/jswc.65.6.331.
- Bitelli, M., F. Tomei, A. Pistocchi, M. Flury, J. Boll, E.S. Brooks, and G. Antolini. 2010. Development and testing of a physically-based, three-dimensional model of surface and subsurface hydrology. *Advances in Water Resources* 33:106-22.

Journals (cont.):

- Swiger, N., and J. Boll. 2009. Groundwater sampling to achieve aquifer representativeness. *The Professional Geologist*, 46(6): 41-49.
- Lin, H.S., E. Brooks, P. McDaniel, and J. Boll. 2008. Hydropedology and surface/subsurface runoff processes. In M. G. Anderson (Editor-in-Chief) *Encyclopedia of Hydrologic Sciences*. John Wiley & Sons, Ltd. DOI: 10.1002/0470848944.hsa306.
- Gorsevski, P., J. Boll, E. Gomezdelcampo, and E.S. Brooks. 2008. Dynamic riparian buffer widths from potential non-point source pollution areas in forested watersheds. *Forest Ecology and Management* 256:664-673.
- McDaniel, P.A., M.P. Regan, E. Brooks, J. Boll, S. Barndt, A. Falena, S.K. Young, J.E. Hammel. 2008. Linking fragipans, perched water tables, and catchment-scale hydrological processes. *Catena* 73:166-173.
- Brooks, E.S., J. Boll, and P.A. McDaniel. 2007. Distributed and integrated response of a GIS-based distributed hydrologic model. *Hydrologic Processes* 21:110-122.
- Hilberts, A.G.J., P.A. Troch, C. Paniconi, and J. Boll. 2007. Low-dimensional modeling of hillslope subsurface flow: the relationship between rainfall, recharge, and unsaturated storage dynamics. *Water Resour. Res.* Vol 43, W03445, doi:10.1029/2006WR004964.
- de Rooij, G. H. O.A. Cirpka, F. Stagnitti, S.H. Vuurens, and J. Boll. 2006. Solute transport and dilution in heterogeneous soils: analyzing multicompartment percolation sampler data. *Vadose Zone Journal* 5: 1086-1092.
- Gorsevski, P.V., P.E. Gessler, J. Boll, W.J. Elliot, R.B. Foltz. 2006. Spatially and temporally distributed modeling of landslide susceptibility. *Geomorphology* 80(3-4): 178-198
- Brooks, E.S., J. Boll, W.J. Elliot and T. Dechert. 2006. A GPS/GIS-based approach for sediment detachment and delivery modeling on large road networks using WEPP. *Journal of Hydrologic Engineering*. 11(5):418-426.
- Dai, X and J. Boll. 2006. Settling velocity of *Cryptosporidium Parvum* and *Giardia Lamblia*. *Water Research*. 40(6):1321-1325
- Hasan, S., P.A. Troch, J. Boll, and C. Kroner. 2006. Modeling the hydrological effect on local gravity at Moxa, Germany. *J. Hydrometeor* 7, 346-354.
- Vuurens, S., F. Stagnitti, G. de Rooij, J. Boll, L.(Ling) Li, X. Xiong, M. LeBlanc, D. Ierodionou, S. Salzman, and V. Versace. 2005. Quantifying effects of soil heterogeneity on groundwater pollution in four sites in the USA. *Scientia Sinica* (Science in China), Series C, Life Sciences), 48(1), pp.118-127. (Special Issue)
- Sánchez, M. and J. Boll. 2005. The effect of flow path and mixing layer on phosphorus release: Physical mechanisms and temperature effects. *Journal of Environmental Quality*. 34:1600-1609.
- O'Geen, A.T., P.A. McDaniel, J. Boll, and C.K. Keller. 2005. Paleosols as deep regolith: Implications for ground-water recharge across a loessial climosequence. *Geoderma* 126:85-99.
- Walter M.T., E.S. Brooks, D.K. McCool, L.G. King, M. Molnau, and J. Boll. 2005. Process-based snowmelt modeling: does it require more input data than temperature-index modeling? *J. Hydrol.* 300 (1-4):65-75.

Journals (cont.):

- Walter, M.T., V.K. Mehta, A.M. Marrone, J. Boll, P.G. Marchant, T.S. Steenhuis, and M.F. Walter. 2005. Closure to 'Simple Estimation of Prevalence of Hortonian Flow in New York City Watersheds. *ASCE J. Hydrol. Eng* 10 (2): 169-170.
- Mehta, V.K., M.T. Walter, E.S. Brooks, T.S. Steenhuis, M.F. Walter, M. Johnson, J. Boll, and D. Thongs. 2004. Application of SMR to modeling watersheds in the Catskill Mountains. *Environ. Modeling and Assess.* 9:77-89.
- Brooks, E.S., J. Boll, and P.A. McDaniel. 2004. An experiment to determine the lateral saturated hydraulic conductivity. *Water Resour. Res* 40, W04208, doi:10.1029/2003WR002858.
- Dai, X., J. Boll, M.A. Hayes, and D.E. Aston. 2004. Adhesion of *Cryptosporidium parvum* and *Giardia lamblia* to Solid Surfaces: the role of surface charge and hydrophobicity. *Colloids and Surfaces, B: Biointerfaces* 34(4):259-263.
- Hanson, D., J. Boll, T.S. Steenhuis, and M.F. Walter. 2004. Effects of soil degradation and management practices on the surface water dynamics in the Talgua River watershed in Honduras. *Land Degradation and Development* 15:1-15.
- O'Geen, A.T., P.A. McDaniel, J. Boll and E.S. Brooks. 2003. Hydrologic Processes in Valley Soilscapes of the Eastern Palouse Basin in Northern Idaho, *Soil Science* 168(12):846-855.
- Johnson, M.S., W.F. Coon, V.K. Mehta, T.S. Steenhuis, E.S. Brooks, and J. Boll. 2003. Application of two hydrologic models to a Central New York State watershed: A comparison of HSPF and SMR. *J. Hydrol.* 284(1-4): 57-76.
- Wang, G.-T., S. Chen, J. Boll, and V.P. Singh. 2003. Nonlinear convection-diffusion equation with mixing-cell method for channel flood routing. *ASCE J. Hydrolog. Eng.* 8:259-265.
- Wang, G., S. Chen, and J. Boll. 2003. A semi-analytical solution of the Saint-Venant equations for channel flood routing. *Water Resources Research* 39(4):1076-1085.
- Dai, X., and J. Boll. 2003. Evaluation of Attachment of *Cryptosporidium Parvum* and *Giardia Lamblia* to Soil Particles. *Journal of Environ. Quality* 32: 296-304
- Walter, M.T., V.K. Metha, A.M. Marrone, J. Boll, P.G. Marchant, T.S. Steenhuis, and M.F. Walter. 2003. A Simple Estimation of the Prevalence of Hortonian Flow in the New York City Watersheds. *ASCE J. Hydrol. Eng* 8:214-218. (Errata: *ASCE J. Hydrol. Eng* 9:70)
- O'Geen, A.T., P.A. McDaniel, J. Boll. 2002. Chloride distributions as indicators of vadose zone stratigraphy in semiarid loess deposits. *Vadose Zone Journal* 1:150-157
- Wang, G., S. Chen, J. Boll, C.O. Stöckle and D.K. McCool. 2001. Modeling overland flow based on Saint-Venant equations using a discretized hillslope approach. *Hydrol. Processes.* 16(12):2409-242.
- Walter, M.T., E.S. Brooks, J. Boll, M.F. Walter, C.S. Scott, P. Kleinmann, and T.S. Steenhuis. 2001. Soluble phosphorus transport from manure-applied fields under various spreading strategies. *Journal of Soil and Water Conservation* 56(4): 329-336.
- Walter, M.T., M.F. Walter, E.S. Brooks, T.S. Steenhuis, J. Boll, and K.W. Weiler. 2000. Hydrologically Sensitive Areas: Variable Source Area Hydrology Implications for Water Quality Risk Assessment. *Journal of Soil and Water Conservation* 55(3): 277-283.

Journals (cont.):

- Walter, M.T., J.-S. Kim, T.S. Steenhuis, J.-Y. Parlange, A. Heilig, R.D. Braddock, J.S. Selker, and J. Boll. 2000. Funneled flow mechanisms in a sloping layered soil: Laboratory investigation. *Water Resources Research* 36(4): 841-849.
- Scott, C.A., M.F. Walter, E.S. Brooks, J. Boll, M.B. Hes, and M.D. Merrill. 1998. Impacts of Historical Changes in Land Use and Dairy Herds on Water Quality in the Catskills Mountains. *J. Env. Qual.* 27: 1410-1417.
- Steenhuis, T.S., K. Vandenheuveld, K.W. Weiler, J. Boll, J. Daliparthi, S.J. Herbert, and K.-J.S. Kung. 1998. Mapping and Interpreting Soil Textural Layers to Assess Agri-chemical Movement at Several Scales along the Eastern Seaboard (USA). *Nutrient Cycling in Agroecosystems* 50: 91-97.
- Weiler, K.W., T.S. Steenhuis, J. Boll, and K.-J.S. Kung. 1998. Comparison of Ground-Penetrating Radar and Time-Domain Reflectometry as Soil Water Sensors. *Soil Sci. Soc. Am.* 62: 1237-1239.
- Boll, J., J.S. Selker, G. Shalit, and T.S. Steenhuis. 1997. Distribution of Transport Parameters Derived from Pan Sampler Data. *Water Resour. Res.* 33(12): 2655-2664.
- Boll, J., R.P.G. van Rijn, K.W. Weiler, J.A. Ewen, J. Daliparthi, S.J. Herbert, and T.S. Steenhuis. 1996. Using Ground-Penetrating Radar to detect layers in a sandy field soil. *Geoderma* 70: 117-132.
- Tomer, M.D., J. Boll, K.-J.S. Kung, T.S. Steenhuis, and J.L. Anderson. 1996. Detecting illuvial lamellae in fine sand using Ground-Penetrating Radar. *Soil Science* 161(2): 121-128.
- Merwin, I.A., J.A. Ray, T.S. Steenhuis, and J. Boll. 1996. Groundcover Management Systems Influence and Nitrate-N Concentrations in Leachate and Runoff from a New York Apple Orchard. *Journal of the American Society for Horticultural Science*. 121(2): 249-257.
- Steenhuis, T.S., J. Boll, G. Shalit, J.S. Selker, and I.A. Merwin. 1994. A Simple Equation for Predicting Preferential Flow Solute Concentrations. *Journal of Environmental Quality* 23(5): 1058-1064.
- Shalit, G., T.S. Steenhuis, H.M. Hakvoort, J. Boll, L.D. Geohring, and H.M. van Es. 1993. Subsurface Drainage Water Quality from Structured Soil. *Journal of Irrigation and Drainage Engineering*, 121(3): 239-247.
- Boll, J., T.S. Steenhuis, and J.S. Selker. 1992. Fiberglass Wicks for Sampling Water and Solutes in the Vadose Zone. *Soil Sci. Soc. Am. J.* 56(3): 701-707.
- Steenhuis, T.S., H.M. van Es, J.-Y. Parlange, P.C. Baveye, M.F. Walter, L.D. Geohring, J.L. Hutson, T.L. Richard, J.L. Bell, J. Boll, J. Gannon, Y. Liu, W.E. Sanford, M. Alexander, R.B. Bryant, J.S. Selker, Y. Tan, P. Vandevivere, S.M.L. Verheyden, and J. Vermeulen. 1991. *Hydrology and the Environment*. New York's Food and Life Sciences Quarterly 20(3): 15-19.
- Boll, J., T.J.M. Thewessen, E.L. Meijer, and S.B. Kronenberg. 1988. A Simulation of the Development of River Terraces. *Z. Geomorph. N.F.* 32(1): 31-45.

Journal Articles Submitted/in progress:

- Al-Hamdan, O.Z, Pierson Jr., F.B., Williams, C.J., Nearing M.A., Stone J.J., Moffet, C.A., Kormos, P.R., Boll, J., and Weltz, M.A. Characteristics of concentrated flow hydraulics for rangeland ecosystems: implications for hydrologic modeling, submitted to *Water Resources Research* Sept 2010.
- Brooks, E.S., J. Boll, and P.A. McDaniel. Hydropedology in seasonally dry landscapes – The Palouse region of the Pacific Northwest, USA. Chapter 22 in *Hydropedology*, Ed Henry Lin. Submitted.

Journal Articles Submitted/in progress(cont.):

- Boll, J., E.S. Brooks, and others. Dominant hydrologic process modeling applied to an agricultural and forested watershed in northern Idaho.
- Boll, J., E.S. Brooks, E.S., B. Crabtree, S. Dun, and J. Wu. Incorporation of variable source area hydrology in WEPP.
- Hilberts, A.G.J., P.A. Troch, J. Boll, and E.S. Brooks. Evaluation of a low-dimensional coupled hillslope-hydrological model using data from a plot-scale experimental site in Troy (ID), USA.
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- Brooks, E.S., and Boll, J. 2011. Building process-based understanding for improved adaptation and management. International Symposium on Erosion and Landscape Evolution CD-Rom Proceedings, 18-21 September 2011, Anchorage Alaska St. Joseph, Michigan ASABE.

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- Brooks, E.S., W.J. Elliot, and J. Boll. 2010. Multi-watershed assessment of WEPP in the Tahoe Basin. Abstract H41F-1150 presented at 2010 Fall Meeting, AGU, San Francisco, CA, 13-17 Dec.
- Edstrom, A., J. Boll, E.S. Brooks, and J. Abatzoglou. 2010. Identifying hydrologically sensitive watersheds in the Pacific Northwest, USA under future climates. Abstract H33C-1146 presented at 2010 Fall Meeting, AGU, San Francisco, CA, 13-17 Dec.
- Saia, S., T.S. Steenhuis, Z.M. Easton, J. Boll, and E.S. Brooks. 2010. Modeling the impact of landscape variability on nutrient and pesticide dynamics in CEAP watersheds. H33A-1118 presented at 2010 Fall Meeting, AGU, San Francisco, CA, 13-17 Dec.
- Sanchez-Murillo, R., E.S. Brooks, and J. Boll. 2010. Quantifying the net impacts of the Troy wastewater treatment plant on Steelhead habitat in the West Fork Little Bear drainage. Abstract H41C-1115 presented at 2010 Fall Meeting, AGU, San Francisco, CA, 13-17 Dec.
- Williams*, J., F.B. Pierson, P.R. Robichaud, K.E. Speath, S.P. Hardegree, P.E. Clark, C.A. Moffet, O.Z. Al-Hamdan, and J. Boll. 2010. Hydrologic vulnerability and risk assessment associated with the increased role of fire on western landscapes, Great Basin, USA. Abstract NH41A-1481 presented at 2010 Fall Meeting, AGU, San Francisco, CA, 13-17 Dec.
- Boll, J., J.W. Machala, E.S. Brooks, and A. Edstrom. 2009. Localized climate change scenarios using a downscaling methodology with a distributed hydrology model, *Eos Trans. AGU*, 90(52), Fall Meet. Suppl., Abstract U13B-0056.
- Brooks, E.S. and J. Boll. 2009. Uses and limitations of the soil survey in hydrological modeling, *Eos Trans. AGU*, 90(52), Fall Meet. Suppl., Abstract H21F-0914.
- Al-Hamdan, O.Z., F.B. Pierson, C.J. Williams, P.K. Kurmos, M.A. Nearing, and J. Boll. 2009. Slope impacts on concentrated flow hydraulics in rangeland. *Eos Trans. AGU*, 90(52), Fall Meet. Suppl., Abstract EP31B-0595.
- Sanchez-Murilo, R., J. Boll, and E.S. Brooks. 2009. Hydrologic characterization using event based $\delta^{18}\text{O}$, Si, and hydrometric measurements, *Eos Trans. AGU*, 90(52), Fall Meet. Suppl., Abstract H33H-0990.
- Horsburgh, J.S., D.G. Tarboton, K. Schreuders, D.P. Ames, J.P. McNamara, L.A. Marshall, B.L. McGlynn, D.L. Kane, A. Tidwell, J. Boll, N.W. Hinman, and M.E. Barber. 2009. INRA Constellation of experimental watersheds: Cyberinfrastructure to support publication of water resources data, *Eos Trans. AGU*, 90(52), Fall Meet. Suppl., Abstract H21F-0914.
- Foster, S.E., J. Boll, and S.K. Swanson. 2008. Groundwater-surface water interactions in the Palouse Basin, Northwestern Idaho and Southeastern Washington. Presented at the Geological Society of America North-Central Section - 42nd Annual Meeting, Evansville, IN, 24-25 April 2008.
- Brooks, E.S., K. Ostrowski, J. Boll, and A. Snyder. 2008. Particle size influence on the relationship between turbidity and total suspended solids. Presented at the CUASHI workshop, Boulder, CO, July 16-18, 2008.
- Toohy, R., J. Boll, E.S. Brooks, and J. Jones. 2007. Land use as a parameter of distributed hydrological modeling at the CATIE Farm, Turrialba, Costa Rica. *Eos Trans. AGU*, 88(23), Jt. Assem. Suppl., Joint Assembly Acapulco, Mexico 22-25 May, 2007, Abstract H33B-14.

Poster Presentations (cont.):

- Boll, J., B. Cosens, F. Fiedler, T. Link, P. Wilson, C. Harris, M. Tuller, G. Johnson, and B. Kennedy. 2006. University of Idaho Water of the West Initiative: Development of a sustainable, interdisciplinary water resources program. *Eos Trans. AGU*, 87(52), Fall Meet. Suppl., Abstract ED31A-1361.
- Toohy, R., E.S. Brooks, J. Jones, and J. Boll. 2006. The Effects of Land use on Soil Properties and Runoff Response at the CATIE Farm, Turrialba, Costa Rica. *Eos Trans. AGU*, 87(52), Fall Meet. Suppl., Abstract H13B-1377.
- Brooks, E.S., J. Boll, W.J. Elliot, and T. Dechert. 2006. Road Erosion Modeling Using the WEPP Model: Validation and Application to Large Road Networks. *Eos Trans. AGU*, 87(52), Fall Meet. Suppl., Abstract H31C-1443.
- Crabtree, B. E.S. Brooks, K. Ostrowski, W.J. Elliot, and J. Boll. 2006. The Water Erosion Prediction Project (WEPP) model for saturation excess conditions: application to an agricultural and a forested watershed. *Eos Trans. AGU*, 87(52), Fall Meet. Suppl., Abstract H31C-1444.
- Brooks, E.S. and J. Boll, J. Gravelle, J.A. Hubbart, T.E. Link, T.W. Cundy, and W.J. Elliot. 2006. Long-term Continuous GIS-based Modeling of Forest Land Use Changes in Mica Creek Watershed in Northern Idaho Using Publicly Available Data (Regional and local hydrologic processes for PUB in the inland Pacific Northwest). Presented at the USA PUB Workshop, October 13-16, 2006, Corvallis, OR.
- Wulffhorst, J.D., Kyle Hawley, Erin S. Brooks, Naga S. Tosakana, Jan Boll, Larry Van Tassell, Robert Mahler. 2006. Integrating science and common sense for watershed conservation decisions. Presented at the Managing Agricultural Landscapes Workshop, Soil Water Conservation Society, Westin Crown Hotel, Kansas City, MO, October 11-13, 2006.
- Newson, J., E.S. Brooks, K.M. Ostrowski, and J. Boll. 2006. Measurement and modeling of sediment transport in a cohesive stream in northern Idaho. Paper 062068, Presented at the 2006 ASABE Annual International Meeting, Portland, OR, July 9 -12.
- Brooks, E.S., and J. Boll. 2005. A simple GIS-based snow accumulation and melt model. Western Snow Conference, Great Falls, Montana; April 11-14, 2005, Proceedings, 6 pp.
- Boll, J., E.S. Brooks, J.D. Wulffhorst, M. Isik, and B. Mahler. 2005. Evaluation of conservation practices in a mixed-land use watershed using cumulative effects modeling and interdisciplinary analyses. Presented at the USDA-CSREES National Water Quality Conference, February 6-10, 2005, San Diego.
- Hilberts, A., J. Boll, P.A. Troch, and E.S. Brooks. 2004. Application of the hillslope-storage Boussinesq model to field data from a site in northern Idaho, USA. Presented at the First General Assembly of the European Geosciences Assembly, Nice, France, 25-30 April 2004.
- Hasan, S., J. Boll, P.A. Troch, and C. Croner. 2004. Application of a distributed hydrological model to determine hydrological effect on gravity. Presented at the First General Assembly of the European Geosciences Assembly, Nice, France, 25-30 April 2004.
- Boll, J., E.S. Brooks, and M. Stronks. 2002. Monitoring and Data Collection in the Paradise Creek Watershed. Presented at the 12th Nonpoint Source Water Quality Monitoring Results Workshop, Jan 8-10, Boise, Idaho.
- Boll, J., E.S. Brooks, and D. Traeumer. 2001. Application of a distributed hydrologic model and RUSLE for watershed assessment. *Eos Trans. AGU* 82(47), Fall Meet. Suppl. Abstract H12A-0268, 2001.

Poster Presentations (cont.):

- O'Geen, T, J. Boll, E.S. Brooks, J.I. Linard, P.A. McDaniel, J.B. Sisson, and A. Wylie. 2001. Detection of multiple perched water tables using natural tracers and multilevel tensiometers in deep loess. *Eos Trans. AGU* 82(47), Fall Meet. Suppl. Abstract H52A-0383, 2001.
- Boll, J., E.S. Brooks, J.I. Linard, P.A. McDaniel, T. O'Geen, J.B. Sisson, E.D. Mattson, and A. Wylie. 2001. Progress towards determining fluxes to the deep vadose zone underlying a fragipan soil. Presented at the Eighth Biannual Unsaturated Zone Interest Group Meeting, July 30-August 2, 2001 in Idaho Falls, Idaho.
- Boll, J. and E.S. Brooks. 2000. Lateral versus horizontal hydraulic conductivity in catchment scale hydrology. AGU Annual Fall Meeting, San Francisco, California, 2000.
- Regan, M., P.A. McDaniel, E.S. Brooks, J. Boll, and J.E. Hammel. 1999. Perched water table dynamics and hydrologic processes in an eastern Palouse catchment. 1999 ASA CSSA SSSA Annual Meeting, Salt Lake City, Utah.
- Brooks, E.S., P.A. McDaniel, and J. Boll. 1999. Using detailed field measurements to address scale problems with the Ksat parameter in a GIS-based distributed hydrologic model. AGU Annual Fall Meeting, San Francisco, California, 1999.
- Campbell, C., J. Boll, J.E. Carlson, S. Chen, C.O. Stockle, E. Fiske, D.C. Brown, D. Feichtinger, A.J. Vitale, and D. Neighbor. 1999. An integrated systems approach to watershed restoration with community involvement applied to a small rural watershed Idaho Academy of Science Annual Meeting, Coeur d'Alene, Idaho, March 1999.
- Boll, J., E.S. Brooks, C.R. Campbell, C.O. Stockle, S.K. Young, J.E. Hammel, and P.A. McDaniel. 1998. Progress toward development of a GIS based water quality management tool for small rural watersheds: modification and application of a distributed model. Presented at the 1998 ASAE Annual International Meeting in Orlando, Florida, July 12-16, Paper 982230, ASAE, 2950 Niles Road, St. Joseph, Michigan 49085-9659.
- Pandit, K.N., J. Boll, and M.S. Seyfried. 1998. Soil moisture variability at the sub-catchment scale and its quantification at the watershed scale in the mountainous rangeland areas. AGU Annual Spring meeting, Boston, Massachusetts, 1998.
- Boll, J., R. van Rijn, K. Weiler, and T.S. Steenhuis. 1994. Stratification and Moisture Patterns in a Sandy Soils Using GPR. Workshop on Fingered Flow in Unsaturated Soil: From Field to Model. Wageningen, Netherlands, April 20-21, 1994.
- Steenhuis, T.S., J. Boll, S.A. Aburime, and N.O. Bailey. 1993. Flow and Sampling in Heterogeneous Porous Media. (Abstract.) Thirteenth Annual American Geophysical Union "Hydrology Days". Fort Collins, Colorado, March 30-April 2, 1993.
- Boll, J., K-J. S. Kung, T.S. Steenhuis, L.M.D. Cathles, and H.R. Nelson, Jr. 1990. Improving Groundwater Contamination Modeling by Visualization of Shallow Soil Layers with Ground Penetrating Radar and a Landmark Workstation. Scientific Visualization Workshop. San Francisco, California, September 28, 1990.

Patents:

Hybrid Passive/Automated Flow-Proportional Sampler (6,742,404)

Honors and Awards:

Outstanding Research Faculty in the College of Engineering at University of Idaho, 2006
Nominated for Gamma Sigma Delta Research Award, 2003

Honors and Awards (cont.):

Engineer of the Year, ASAE Pacific Northwest Section, 2002
 Outstanding Young Faculty Award in College of Engineering at University of Idaho, 2000
 Best Paper Award, ASAE meeting mini-conference "Emerging Technologies in Hydrology," August 1997

Grants and Contracts Awarded (~\$7.7M since coming to UI):

- Boll, J. Risk assessment using the rangeland hydrology and erosion model. USDA-ARS (\$63,900), Oct 2012 – Sept 2014.
- Boll, J., and E.S. Brooks, 2011. BMP effectiveness for pollutant trading. IDEQ (\$42,700), May 2011-May 2012.
- Brooks, E.S., and J. Boll. 2010. Base Flow Characterization and Simulation in the Inter-Mountainous Regions of the Pacific Northwest. USDA-FS (\$58,262) Aug, 2010 – Dec, 2012.
- Gosz, J., J. Boll, S. Pinel, S., E. Coats, and E. Yager. WSC-Category 1. Sustainability Dynamics for Water Resources in a Rapidly Urbanizing and Climatically Sensitive Region (\$75,007) NSF, P Sept, 2010-Aug 2012.
- Prather, T., L. Lass, J. Boll, and A. Fremier. 2010. Modeling dispersal of leafy spurge by water when predicting the likelihood of occurrence and rate of spread. USDA-FS (\$109,527) March 2010 – Oct 2013.
- Boll, J. 2010. Evaluation of sediment yield reduction potential in agricultural and mixed use watersheds of the lower Snake River Basin. (\$49,983) Subcontract to WSU, funding from Corps of Engr., March 1, 2010 – January 29, 2011.
- Williams, B., P. Allan, and J. Boll. GK-12: Project in water resources for middle and high schools in rural northern Idaho and eastern Washington. NSF (\$2,900,000), June 2009 – April 2014.
- Boll, J. and P. Wilson. 2009. INRA water research consortium: Research Projects. DOE. (\$80,000), Aug 1, 2009 – Dec 31, 2010.
- Boll, J. INRA water research consortium: CyberInfrastructure. DOE. (\$51,000), Oct 1, 2008 – Dec 31, 2010.
- Boll, J., and P. Wilson. INRA water research consortium: Steering Committee. DOE. (\$25,000), Oct 1, 2008- Dec 31, 2010.
- Boll, J., and J.D. Wulfhorst. Programa de Desarrollo Productivo Riego sostenible para la produccion de hortalizas para el Mercado nacional. Subcontract to CATIE (Costa Rica), in \$816,079 Millenium Challenge Corporation grant (\$118,280), Sept 2008-Sept 2010.
- Walden, V., K. Humes, and J. Boll. Preliminary steps towards understanding the effects of global climate change on long-term trends in water resources in Idaho. Idaho Department of Water Resources/Idaho Water Resources Research Institute/Pacific Northwest Water Resources Council (\$50,000, Dr. Boll's share 40%), August 2007 – July 2008.
- Boll, J. Risk assessment using the rangeland hydrology and erosion model. USDA-ARS (\$273,217), Oct 2007 – Sept 2012.
- Brooks, E.S., and J. Boll. Assessing the sources and transport of fine sediment in response to management practices in the Tahoe Basin using the WEPP model. The Lake Tahoe Research Group (\$117,371), July 2007 – June 2009.

Grants and Contracts Awarded (cont.):

- Link, T., J. Boll, M. Dakins, C. Hoffman, E. Krumpe,, P. Morgan, R. Robberecht, and D. Schlater. Application of Lecture Capture Technology (LCT) to expand degree programs, enhance teaching and learning and transform curricula. Idaho Technology Incentive Grants (ITIG) Program State Board of Education (\$80,000, Dr. Boll's share 10%), July 2007 – June 2008.
- Boll, J., R.L. Mahler, J.D. Wulforst, L. Kurkalova, T.S. Steenhuis, and G. Vellidis. Synthesis and analysis of 13 CEAP projects. USDA-CSREES-CEAP. (\$575,000). October 1, 2007 – August 30, 2012.
- Boll, J., B. Cosens, F. Fiedler, C. Harris, G. Johnson, B. Kennedy, T. Link, M. Tuller, and P. Wilson. 2006. Water of the West: Towards an interdisciplinary, sustainable water resources program. University of Idaho (\$1,666,300). April 2006 – April 2011.
- Boll, J., J.D. Wulforst, L. van Tassell, and R. Mahler. Evaluation of conservation practices in a mixed-land use watershed using cumulative effects modeling and interdisciplinary analyses. USDA-CEAP (\$640,000). September 15, 2004-September 14, 2007.
- Boll, J. Development of WEPP-Prep software and validation of WEPP-Road in Idaho. IDEQ. (\$50,931) April 2004-August 2005.
- Boll, J, S. Chen, and D. McCool. Improving tillage systems for minimizing erosion. USDA-STEPP (\$62,560) August 2004-September 2006.
- Boll, J. and T.L. Link. Modeling Cumulative Effects from Hillside Disturbances at a Watershed Scale USDA Forest Service (\$191,306) June 2003-June 2006.
- Boll, J. and M. Sanchez. Application of Aquaculture Effluent for Production of Native American Plants. UI seed grant, July 1, 2003-June 30, 2004. (\$7,989).
- Boll, J. and M. Sanchez. The Use of Rainbow Trout Effluent as Fertilizer for the Commercial Production of Blue Camas. WSU-UI Aquaculture Initiative funded by USDA-CSREES (\$12,000).
- Boll, J. 2001. Sediment data collection and data management for the South Fork Clearwater River Subbasin assessment and TMDL June 15, 2001-June 15, 2002 (\$46,003).
- Boll, J. 2001. GIS and data management support for TMDL development (IDEQ), May 21, 2001-September 30, 2001 (\$10,564).
- Boll, J. 2001. Clearwater Assessment: Agricultural Contributions. Idaho Soil Conservation Commission February 1, 2001-August 31, 2001 (\$29,000).
- Boll, J., P.A. McDaniel, and A. Wylie. Sediment-basalt Interface. UI-INEEL Research Alliance October 1, 1999-September 30, 2000 (\$65,500).
- Wu, Q.J., J. Boll, P. Jankowski, S. Chen, and C.O. Stöckle. 2000. Experiential Learning in Hydrologic Modeling for Watershed Management: Closing the Gap between Undergraduate Training and Professional Practice. USDA Higher Education Challenge Grant Aug. 15, 2000-Aug. 14, 2003 (\$99,534, Dr. Boll's share 30%).
- Boll, J. An education and research program in hydrology and water quality to support and evaluate watershed restoration. NSF-CAREER July 1, 2000-June 30, 2005 (\$245,000).
- Boll, J., P.A. McDaniel, and A. Wylie. Sediment-basalt Interface. UI-INEEL Research Alliance January 6, 2000-September 30, 2000 (\$78,976).

Grants and Contracts Awarded (cont.):

- Boll, J., P.A. McDaniel, and A. Wylie. Sediment-basalt Interface. UI-INEEL Research Alliance June 15, 1999- September 30, 1999 (\$29,883).
- Boll, J., and S.L. McGeehan. Phosphorus Source/Sink Dynamics in a Flood-Irrigated Agricultural System in Central Idaho. WRRI-State Competition/USGS March 1, 1999–February 28, 2002 (\$35,653).
- Boll, J., J.D. Wulforst, S. Chen, C.O. Stöckle, E. Fiske, D.C. Brown, D. Feichtinger, A.J. Vitale, and M. Stanger. An integrated systems approach to watershed restoration with community involvement applied to a small rural watershed. EPA/NSF/USDA partnership, Water and Watersheds. September 15, 1998- September 14, 2001 (\$325,052).
- Boll, J. Transport Kinetics and Survival of *Giardia lamblia* and *Cryptosporidium parvum*. NSF-EPSCoR February 1, 1998-August 31, 2001 (\$179,860).
- Valley County Soil and Water Conservation District, J. Boll, S.L. McGeehan and E.S. Brooks. Assessing BMP Effectiveness in Reducing Phosphorus Loading in Irrigated Pastures. IDWR March 1, 1998-present (\$32,000, Dr. Boll's share ~50%).
- Boll, J. 1998. Comparison of WEPP and WATSED. USDA-USFS. October 1, 1998-September 30, 2000 (\$9,500).
- Stöckle, C.O., J. Boll, S. Chen. A Problem-Solving Tool for Mitigating the Impact on Water Quality of Management Practices in Small Rural Watersheds. Water Resources Research Regional Competitive Grants Program (USGS), Western Region. September 1, 1997-August 31, 2000 (\$170,107, Dr. Boll's share ~35%).
- Boll, J. Determination of Critical Source Areas Using Physically Based Models in a GIS Environment. University of Idaho Research Council, July 1, 1997-June 30, 1998 (\$5,695).

SERVICE:**Major Committee Assignments:**

University:

- Chair, Advisory Committee for Interim Dean of Law (April 2013 – present)
- Graduate Council, UWP representative (2011 – present)
- Screening Committee for Vice President of Research (December 2006-January 2007)
- Chair of Sabbatical Leave Evaluation Committee (SLEC), 2006-2007
- Member of Sabbatical Leave Evaluation Committee (SLEC), 2000-03, 2005-2008
- Member of Research Council, 2005-2008
- Member of University Computing Advisory Committee (UCAC), 1997-2000

College:

- Member of search committee for Hydrogeology Professor in Geosciences, 2013
- Member of search committee for Law Professor in College of Law, 2006
- Member of IGERT steering committee, 2001-2006
- Evaluation of CALS Awards Packages March 2005
- Member of search committee for Director of Environmental Science Program at UI, 2003
- College of Agriculture Scholarship Committee, 2001, 2002, 2003
- College of Agriculture Teaching Advisory Committee (CATAC), 2000-01
- Member of search committee Computational Hydraulics position in Civil Engineering, 2000
- Member of search committee Distinguished Professor in Ecohydraulics, 2000
- Member of search committee for Soil Physics position in PSES, 2000-01
- Member of search committee for Watershed Hydrologist in Forest Resources, 2000-01
- Promotion and Tenure Committee, Fall 1997

Major Committee Assignments (cont.):

Department:

Member of search committee for Water Resources Engineer, BAE, 2009-10
 Tenure and Promotion Committee for Dr. Tim Link (Forest Resources), 2006
 Tenure Committee for Dr. Klaus Jorde (Civil Engineering), 2006
 Chair of Graduate Program in BAE, 2005 – 2007
 Chair of awards committee, 2002-present
 Chair/member of mentoring committee for Barbara Williams, 2001-present
 Chair of research “SWOT” committee in Strategic Planning Effort, 1997
 Chair of search committee for Assistant Professor in Vadose Zone Hydrology, 2000-01
 Chair of search committee for Hydrology/Climatologists, 1998-99
 Chair of Seminar Committee, 1997-98
 Member of Curriculum Committee, 1997-98
 Member of search committee for Distinguished Professor in Vadose Zone Hydrology, 2000-01
 Member of search committee for Water Resource Engineer, 1997-98
 Member of Social Committee, 1997
 Member Tenure Review Committee for Brad King, 1997
 Reward, Recognition and Excellence in Teaching committee member and chair, 1998-99
 Teaching Load Committee Chair, 1999

Professional and Scholarly Organizations:

Managing Agricultural Landscapes Workshop (Denver, Apr 26-28, 2011): Planning & Technical Program Committee and Session and Panel Moderator, Soil&Water Conservation Society.
 Water Resources Research Symposium (Boise, Nov 28-29): Technical Program Committee, Panel Presenter, and Session Moderator
 Managing Agricultural Landscapes Workshop (Kansas City, Oct 13-15, 2009): Technical Program Committee and Session and Panel Moderator, Soil&Water Conservation Society.
 American Geophysical Union (AGU), 1998-present
 Member of Surface Water Hydrology Committee
 Member of Unsaturated Zone Committee
 Session Convener at AGU Fall 2001 meeting
 American Society of Agricultural Engineers (ASAE), 1998-2004
 Chair of Student Activities, 52nd Annual PNW-ASAE meeting in Boise September 18-19, 1997
 ASAE Student Branch Faculty Advisor, 1996-2000
 Member of Hydrology Group (SW 21)
 American Society of Engineering Education (ASEE), 1999-2004
 Water Environment Federation (WEF), 1998-2000
 Honor Society Gamma Sigma Delta (GSD)
 President-Elect 2000-01
 President 2001-02
 Historian 2002-03

Outreach Service:

Member of USDA review panel for Conservation Effectiveness Assessment Program, 2005, 2006
 TEAMS (Test of Engineering Aptitudes, Mathematics and Science, a team competition for high school students, grades 9-12) Problem Set Development, 1999
 Faculty Advisor to Student International Organization (SIA), 1997-99
 Wrote short articles for Coeur d’Alene Fish and Wildlife newsletter WRAP, 1999-2000

Editorial Services:

Reviewer for Soil Science Society of America Journal
Reviewer for Water Resources Research
Reviewer for American Society of Civil Engineers Journal
Reviewer for Journal of Environmental Quality
Reviewer for Journal of Hydrology

Reviewer for Hydrologic Processes

Community Service:

Paradise Creek Watershed Advisory Group (Moscow, Idaho)
Paradise Creek Watershed Monitoring Committee (Moscow, Idaho)

PROFESSIONAL DEVELOPMENT:

Teaching:

Advising Workshop at University of Idaho, 1999
Attended Western Region Teaching Symposium “Partnerships in Teaching and Learning”, Post Falls, Idaho, October 2-3, 1998. Sponsored by University of Idaho and California State University.
Reward, Recognition and Evaluation of Teaching (RRET) Evaluation Conference in Nebraska, November 19-21, 1997
College of Engineering Retreat, August 18, 1997
ABET 2000 Workshop, August 14-15, 1997
Teaching Development Workshop at University of Idaho, 1996

Scholarship:

Attended Pacific Northwest ASAE meetings “Engineering Biological Processes for Environmental Enhancement,” Fairmont Hot Springs, Montana.
Attended “Water Quality – Beyond 2000, meeting our TMDL Challenge,” Boise, Idaho. Sponsored by USBR, USEPA, IDEQ, ISDA, USDA-NRCS, CH2M Hill.
Attended and presented at the NSF/EPA/USDA Water and Watersheds Program Review meeting in Washington D.C., April 1999
Attended Water Environment Federation conference “Watershed Management: Moving from Theory to Implementation” in Denver, Colorado, May 3-6, 1998

Outreach:

I am part of the interdisciplinary team that initiated the Community Water Resources Center in Coeur d’Alene, at the UI Center.

I assisted in setting up the Memorandum of Understanding between the College of Agriculture and Valley Soil and Water Conservation District. Through this memorandum, we assist the District in data collection and analysis regarding the assessment of BMP effectiveness in reducing phosphorus loading in irrigated pastures.

I provide services to the City of Moscow in monitoring Paradise Creek (located near Moscow, ID) for discharge, and total suspended solids, nitrate, and phosphorus concentrations at four monitoring stations.