

## **BRIAN PAUL BLEDSOE**

**Dept. of Civil & Environmental Engineering  
Graduate Degree Program in Ecology  
1372 Campus Delivery  
Colorado State University  
Fort Collins, CO 80523 USA**

**Phone: (970) 491-8410  
Fax: (970) 491-7727  
Email: [Brian.Bledsoe@colostate.edu](mailto:Brian.Bledsoe@colostate.edu)**

---

### **BIOSKETCH**

Brian Bledsoe is a Professor of Civil and Environmental Engineering at Colorado State University (CSU). Brian has over 25 years of experience as an engineer, hydrologist, and environmental scientist in the private and public sectors. He holds degrees from Georgia Tech, North Carolina State University, and CSU. Before joining CSU, he worked in the private sector as a consulting engineer and surveyor, and for the State of North Carolina as a watershed restoration specialist and state nonpoint source program coordinator. Brian's research is focused on the interface of hydrology, ecology, and urban water sustainability with an emphasis on the management and restoration of streams, floodplains, and watersheds. He received an NSF CAREER Award in 2006, and served as a Fulbright Scholar in Chile in 2008. Brian's scientific advisory and peer-review activities include the Everglades and Louisiana Coastal Area restoration efforts, the Platte River and San Juan River Recovery Implementation Programs, and the EPA Environmental Monitoring and Assessment Program. He is a licensed professional engineer in NC and CO.

### **RESEARCH INTERESTS**

Hydrology, hydraulics, and fluvial geomorphology  
Ecological engineering and ecosystem restoration  
Urban streams, stormwater, and floodplain networks  
Water-centered planning for sustainability and resilience  
Watershed management  
Water quality / quantity interface

### **EDUCATION**

- Ph.D. Colorado State University, Fort Collins, CO, 1999**  
Civil Engineering – Hydraulics and River Mechanics
- M.S. North Carolina State University, Raleigh, NC, 1993**  
Interdisciplinary Program in Forestry, Hydrology, and Restoration Ecology
- B.M.E. Georgia Institute of Technology, Atlanta, GA, 1987**  
Mechanical Engineering – Fluids and Thermal Systems Emphasis

### **REGISTRATION**

**Professional Civil Engineer:** Colorado (#40411), North Carolina (#21050)

## **HONORS**

- 2014, Invited as O. T. Hayward Distinguished Speaker, Baylor University, Waco, TX. Two invited presentations planned on urban streams and fluvial geomorphology, to be presented on April 8 and 9, 2015.
- 2014, Invited keynote address entitled “Resilient and rambunctious floodplains” at the 25th Annual Colorado Association of Stormwater and Floodplain Managers (CASFM) Conference, Vail, CO, October 1.
- 2014, Invited keynote entitled “Addressing Key Uncertainties in Stream Restoration Projects” at EcoStream 2014 – Stream Ecology and Restoration Conference, North Carolina State University, Charlotte, NC, November 17-20
- 2013, Invited keynote address to River Restoration Northwest Annual Symposium, Stevenson, WA
- 2013, Faculty Award for Excellence in Teaching, Department of Civil and Environmental Engineering, Colorado State University, Fort Collins, CO
- 2011, Outstanding Faculty Performance Award, Department of Civil and Environmental Engineering, Colorado State University, Fort Collins, CO
- 2009, Outstanding Mid-Career Faculty Member, College of Engineering, Colorado State University, Fort Collins, CO
- 2008, Fulbright Scholar in Chile, Department of State – Fulbright Commission. Fulbright Scholar grant at the Centro EULA de Chile, Universidad de Concepción in Chile
- 2007, Outstanding Faculty Performance Award, Department of Civil and Environmental Engineering, Colorado State University, Fort Collins, CO
- 2007, International Service Award, College of Engineering, Colorado State University, Fort Collins, CO
- 2006, Selected as the Borland Chair of Hydraulics, Department of Civil and Environmental Engineering, Colorado State University, Fort Collins, CO
- 2006, NSF CAREER Award: Stream Restoration, Ecological Engineering, and Nutrient Retention of Streams in Urban and Agricultural Settings, National Science Foundation, Washington, DC.
- 2006, Exceptional Achievement in Service and Experiential Learning Award, Engineers Without Borders, College of Engineering, Colorado State University, Fort Collins, CO
- 2003, Outstanding Faculty Performance Award, Colorado State University, Fort Collins, CO

## **ACADEMIC POSITIONS**

2013-present	Professor with tenure, Civil and Environmental Engineering, Colorado State University
2007-2013	Associate Professor with tenure, Civil and Environmental Engineering, Colorado State University
2000-2007	Assistant Professor (tenure-track starting 2002), Civil and Environmental Engineering, Colorado State University
1999-2001	Research Associate, Civil Engineering, Colorado State University
1997-1998	Research Assistant, Civil Engineering, Colorado State University
1991-1993	Graduate Research and Teaching Assistant, Forestry, North Carolina State University
1990	Environmental Engineering Research Technician, Environmental Sciences and Engineering, School of Public Health, University of North Carolina–Chapel Hill

## **COURSES DEVELOPED AND TAUGHT**

CIVE 203 Engineering Systems and Decision Analysis  
CIVE 330 Ecological Engineering  
CIVE 413 Environmental River Mechanics  
CIVE 440 Nonpoint Source Pollution  
CIVE 613 Stream Restoration Design

## **OTHER POSITIONS**

**Nonpoint Source Program Coordinator – Environmental Engineer II** / North Carolina Department of Environment and Natural Resources, Division of Water Quality / Raleigh, NC / January 1996 – August 1997

- Supervised the Nonpoint Source Planning Group in developing and implementing numerous water quality restoration and protection initiatives including Nutrient Sensitive Waters management plans, basin-wide management plans, wetland / stream restoration plans, GIS-based nonpoint source (NPS) modeling, and integrated management of point and diffuse pollution.
- Lead engineer in the development and implementation of best management practices and ecosystem rehabilitation measures designed to improve water quality in NPS impaired waters.
- Presented frequent written and oral reports on water quality issues and the scientific basis of program initiatives to the NC Legislature, Governor's staff, NCDENR administration, local governments, and to various agricultural, development, and environmental stakeholders.
- Negotiated with other agencies and interest groups to arrive at engineering and policy decisions which established and prioritized NPS control strategies to protect water quality throughout NC.
- Prepared federal NPS grant applications and administered contractual agreements exceeding \$2,000,000 under §319 of the Clean Water Act.

**Environmental Specialist** / North Carolina Department of Environment and Natural Resources, Division of Coastal Management / Raleigh, NC / March 1994 – January 1996

- Lead engineer for NCDENR in providing technical guidance to FHWA and NCDOT in impact avoidance, long term mitigation planning, and development of mitigation plans and specifications for transportation projects involving impacts to streams and wetlands.
- Developed technical foundation and state / federal agency support for a state-wide stream and wetland restoration program which led to enabling legislation and a \$9,000,000 appropriation from the NC General Assembly.
- Project leader responsible for a regional watershed analysis project involving development and implementation of a geographic information system (GIS) combined with hydrologic modeling for targeting watershed rehabilitation strategies to address water quality problems.
- Supervised GIS technicians and field crews in performing GIS analyses, Global Positioning System location surveys, mapping, site assessment, and prioritization of candidate sites for watershed rehabilitation measures.

**Graduate Research and Teaching Assistant** / North Carolina State University / Department of Forestry Raleigh, NC / January 1991 – July 1993

- Supervised and conducted research on the hydrology, hydraulics, water quality, and ecology of streams and wetlands to determine design criteria for ecosystem restoration projects.
- Developed functional design, performed hydrologic and ecological modeling, and assisted in the construction management of a \$300,000 project to restore and create riverine wetland systems.
- Entirely responsible for teaching an undergraduate course on computer applications in natural resources management.

**Environmental Engineering Research Technician** / University of North Carolina - Chapel Hill  
Department of Environmental Sciences and Engineering / January 1990 – December 1990

- Supported air quality research program by performing photochemical pollution experiments, data analysis, maintenance and repair of instrumentation, and structural / electrical renovation of lab.
- Designed and built a computerized data acquisition system for use in air quality research.

**Survey Crew Chief** / Diamondback Land Surveys / Las Cruces, NM / March 1989 – September 1989

- Supervised survey crews and operated total stations, theodolites, levels, and other survey equipment in the performance of construction and boundary surveys.

**Project Engineer** / J.P. Bledsoe Company / Dalton, GA / September 1987 – March 1989

- Performed engineering design and construction layout for land development, highway, and bridge projects. Supervised survey crews and operated total stations, theodolites, and levels.

**Engineering Intern** / Dalton Utilities / Dalton, GA / June 1983 – September 1983

- Performed diverse tasks at municipal water treatment plants including sample collection, assisting plant operators, and plant maintenance.

## **CURRENT RESEARCH PROJECTS**

“Urban Water Innovation Network: Transitioning Toward Sustainable Urban Water Systems,” Co-PI, National Science Foundation – Sustainability Research Network, \$12M

“Center for System-Level Optimal Strategies for Nutrient Management (CLEAN),” Co-PI, U. S. Environmental Protection Agency, \$2,291,486

“Technical Support for Development of Numeric Flow Criteria to Support Freshwater Bio-objectives, Hydromodification Management, and Nutrient Numeric Endpoints – SCCWRP,” PI, Southern California Coastal Water Research Project, \$477,867

“Design Hydrology for Stream Restoration and Channel Stability at Stream Crossings,” PI, National Cooperative Highway Research Program, Transportation Research Board, \$350,000

“Fluvial Instability and Riparian Degradation: Evaluating & Reducing Nutrient Loading from Channel-Riparian Interfaces,” PI, U.S. Environmental Protection Agency, \$208,508 [this project is part of the CLEAN Center project listed above]

“Identification of Outstanding Resource and Impaired Waters in the National Park System,” Co-PI, Department of the Interior – National Park Service, \$179,280

“Stream Restoration: A Crucial New BMP Database Module,” Co-PI, Water Environment Research Foundation, \$150,000

“Upper Arkansas River Stream Rehabilitation Habitat Comparison and Vegetation Monitoring,” PI, Colorado Parks and Wildlife, \$121,170

“Answering Ecological Management Questions for Coastal National Parks Using GIS Tools,” PI, Department of the Interior – National Park Service, \$93,837

“River Change and Flood Hazards on the Colorado Front Range,” PI, Colorado Water Conservation Board, \$49,853

“Channel Degradation and Phosphorus in Stream Bank Soil Samples,” PI, Urban Drainage and Flood Control District, \$30,000

“Stream Power and Geomorphic Change During the 2013 Front Range Floods,” PI, US Forest Service, \$29,087

“Fixing the Leaks: Uniting Epidemiologists and Environmental Engineers to Investigate and Improve Water Infrastructure and Human Health During Extreme Rainfall and Floods,” Co-PI, Colorado Water Institute, \$25,000

“Flow, Sediment Transport and Nutrient Flux Monitoring using Seismic and Infrasound Signals,” Co-PI, Colorado Water Institute, \$23,794

“2D vs 3D Whitewater Park Analysis,” PI, Colorado Parks and Wildlife, \$29,859

“Bed Material and Flushing Analysis for the Colorado River in Eagle County, Colorado,” PI, Eagle River Watershed Council, \$8,800

## **PAST RESEARCH PROJECTS**

“Development of Tools for Hydromodification Assessment and Management,” PI, Southern California Coastal Water Research Project, \$449,100

“Stream Restoration, Ecological Engineering, and Nutrient Retention of Streams in Urban and Agricultural Settings,” PI, National Science Foundation CAREER Award, \$450,000

“Altered Channel Morphology as a Result of Urbanization and Other Land Uses in Watersheds,” PI, U.S. Environmental Protection Agency, \$186,000

“An Ecohydrological Approach to Managing Intermittent and Ephemeral Streams on Department of Defense Lands,” PI, U. S. Department of Defense and University of Arizona, \$413,111

“Hierarchical Physical Classification of Western Streams: Predicting Biological Condition in Terms of Key Environmental Processes Bridging Local to Ecoregional Scales,” PI, U.S. Environmental Protection Agency, \$788,144

“Linking Watershed Characteristics with Flow Regime and Geomorphic Context to Diagnose Water Quality Impairment at Multiple Spatial and Temporal Scales,” Co-PI, U.S. Environmental Protection Agency, \$897,798

“Predicting Relative Risk of Establishment and Persistence of Riparian and Aquatic Invasive Species in River Networks,” Co-PI, U. S. Environmental Protection Agency, \$599,748

“Protocols for Studying Wet Weather Impact Urbanization,” Co-PI, Water Environment Research Foundation, \$299,994

“Fate and Transport of Metals and Sediment in Surface Water,” Co-PI, U.S. Environmental Protection Agency, \$201,026

“Evaluation of Enhanced Stream Bank Stabilization for Controlling Nutrient Loads in Watersheds,” Co-PI, U. S. Department of Agriculture, \$337,036

“Utilizing Bank Stabilization Structures for Controlling Nitrate and Phosphate Contamination of Ground Water and Surface Water Sources,” Co-PI, Colorado Agricultural Experiment Station. \$19,800

“Demonstration Erosion Control Monitoring,” Co-PI, U. S. Army Corps of Engineers, Waterways Experiment Station, \$304,840

“Field Characterizations of the Hydraulics of Steep Channels,” Co-PI, National Science Foundation, \$195,251

“Little Snake River Monitoring,” PI, Three Forks Ranch Corporation, \$165,000

“Effects of Wet Weather Discharges on the Physical Character of Aquatic Habitat,” Co-PI, Water Environment Research Foundation, \$123,322

“Inventory and Assessment of the Colorado River Corridor in Eagle County, Colorado,” PI, Eagle River Watershed Council, \$112,700

“National Riparian Protocol Development,” PI, U. S. Department of Agriculture and U. S. Forest Service, \$145,000

“Assessing Snow-Making Impacts to Stream Channels,” Co-PI, U.S. Department of Agriculture, Forest Service, \$77,504

“Stream Geomorphic Assessments and Prioritization of Stream Restoration Projects,” PI, City of Fort Collins, \$64,409

“Investigation of the Effects of Whitewater Parks on Aquatic Resources in Colorado: Year 3,” PI, Colorado Water Conservation Board, \$71,000

“National Riparian Protocol Geomorphic Valley Classification Tool Upgrade and NFS Valley Map Product Development,” Co-PI, U.S. Department of Agriculture – U.S. Forest Service – Forest Research, \$24,500

- “National Riparian Protocol Geomorphic Valley Classification Tool Upgrade and Production of Valley Classification Map Data Product for the Western US,” Co-PI, U.S. Department of Agriculture – U.S. Forest Service – Forest Research, \$24,500
- “Biocomplexity – Modeling Urban Aquatic Ecology / Hydrologic / Geomorphologic Relationships on Urbanizing Streams in the West,” Co-PI, National Science Foundation, \$99,633
- “Flushing Flow Quantification – Fraser River, CO,” PI, Colorado Trout Unlimited, \$39,341
- “Investigation of the Effects of Whitewater Parks on Aquatic Resources in Colorado: Year 1,” PI, Colorado Division of Parks and Wildlife, \$49,800
- “Investigation of the Effects of Whitewater Parks on Aquatic Resources in Colorado: Year 2,” PI, Colorado Water Conservation Board, \$46,000
- “Investigation of the Effects of Whitewater Parks on Aquatic Resources in Colorado: Year 3,” PI, Colorado Water Conservation Board, \$43,796
- “Upper Arkansas River NRD – Reddy SWA/Crystal Lakes STL Project Design Collaboration and Quality Assurance Review,” PI, Colorado Department of Natural Resources, \$44,376
- “Developing Flow Recommendations for Turquoise Reservoir and Establishing Riparian Monitoring Points for the Upper Arkansas River,” Co-PI, Colorado Division of Wildlife, \$42,023
- “Eagle River Inventory and Assessment,” PI, Eagle River Watershed Council, \$48,877
- “Upper Arkansas River NRD – Hayden Meadows Project Design Quality Assurance Review,” PI, Colorado Department of Natural Resources, \$39,214
- “GeoTools for Rapid Dynamic Channel Analysis and Biological Assessment,” PI, U.S. Department of the Interior, Bureau of Reclamation, \$35,021
- “Geomorphic Assessment of Fisheries Enhancement Features on the Big Sandy River, Wyoming,” PI, U.S. Department of the Interior, Bureau of Reclamation, \$19,297
- “Cache la Poudre River Post-Fire Sediment and Aquatic Insect Monitoring,” Co-PI, Colorado Division of Parks and Wildlife and City of Fort Collins, \$16,000
- “Mapping Geomorphic Settings in the Colorado River Basin for Environmental Flow Analysis,” PI, CDM Smith, \$12,117
- “Review of Water Management Scenarios for the North Fork Poudre River,” Co-PI, The Nature Conservancy, \$10,000
- “2014CO301B Investigation of the Effects of White Water Kayak Parks on Aquatic Resources in Colorado,” PI, Department of the Interior, U.S. Geological Survey, \$5,000.
- “Vision Paper: River Restoration,” Co-PI, Consortium of Universities for the Advancement of the Hydrologic Sciences, Inc., \$4,820
- “Campbell Valley Monitoring and Restoration Recommendations,” PI, Wildlands Restoration Volunteers, \$2,503

## **PUBLICATIONS AND PRESENTATIONS**

### **Refereed Journal Articles**

*\*co-author(s) is current or former graduate advisee (as advisor or committee member)*

1. \*Sholtes, J. and B.P. Bledsoe. In revision. The Half-Yield Discharge: A Process-Based Predictor of Bankfull Discharge. *ASCE Journal of Hydraulic Engineering*.
2. Wohl, E.E., B.P. Bledsoe, K.D. Fausch, N. Kramer, K.R. Bestgen, and M.N. Gooseff. In revision. Management of Large Wood in Streams: A Risk Analysis Based on Physical, Biological, and Social Factors. *Journal of the American Water Resources Association*.
3. \*Fox, B.D., B.P. Bledsoe, \*E. Kolden, \*M.C. Kondratieff, and C.A. Myrick. In revision. Eco-hydraulic Evaluation of Whitewater Parks as Fish Passage Barriers. *Journal of the American Water Resources Association*.

4. \*Kolden, E., \*B.D. Fox, B.P. Bledsoe, and \*M.C. Kondratieff. In press. Modeling Whitewater Park Hydraulics and Fish Habitat in Colorado. *River Research and Applications*. DOI: 10.1002/rra.2931.
5. \*Stephens, T.A., B.P. Bledsoe, \*B.D. Fox, \*E. Kolden, and \*M.C. Kondratieff. 2015. Effects of Whitewater Parks on Fish Passage: A Spatially Explicit Hydraulic Analysis. *Ecological Engineering*, 83:305–318, doi:10.1016/j.ecoleng.2015.06.032.
6. \*Mueller-Price, J.M., B.P. Bledsoe, and \*D.W. Baker. 2015. Influences of Sudden Changes in Physical Stream Characteristics on Transient Storage and Nitrate Uptake in an Urban Stream. *Hydrological Processes*, 29:1466-1479, DOI: 10.1002/hyp.10275.
7. Wohl, E.E., B.P. Bledsoe, R.B. Jacobson, N.L. Poff, S.L. Rathburn, D. Walters, and \*A.C. Wilcox. 2015. The Natural Sediment Regime in Rivers: Broadening the Foundation for Ecosystem Management. *Bioscience*, 65(4): 358-371, DOI: 10.1093/biosci/biv002
8. \*Sholtes, J., K. Wyberlo, and B. Bledsoe. 2014. Physical Context for Theoretical Approaches to Sediment Transport Magnitude-Frequency Analysis in Alluvial Channels. *Water Resources Research*, 50(10): 7900–7914, DOI: 10.1002/2014WR015639.
9. \*Yochum, S.E., B.P. Bledsoe, E.E. Wohl, and G.C.L. David. 2014. Spatial Characterization of Roughness Elements in High-gradient Channels of the Fraser Experimental Forest, Colorado, USA. *Water Resources Research*, 50(7): 6015–6029, DOI: 10.1002/2014WR015587.
10. \*Wilding, T.K., B. Bledsoe, N.L. Poff, and J. Sanderson. 2014. Predicting Habitat Response to Flow Using Generalized Habitat Models for Trout in Rocky Mountain Streams. *River Research and Applications*, 30(7): 805–824, DOI: 10.1002/rra.2678.
11. \*Hawley, R.J., and B.P. Bledsoe. 2013. Channel Enlargement in Semiarid Suburbanizing Watersheds: A Southern California Case Study. *Journal of Hydrology*, 496:17–30, DOI: 10.1016/j.jhydrol.2013.05.010.
12. Bledsoe, B.P., E.D. Stein, \*R.J. Hawley, and D. Booth. 2012. Framework and Tool for Rapid Assessment of Stream Susceptibility to Hydromodification. *Journal of the American Water Resources Association*, 48(4):788–808; DOI: 10.1111/j.1752-1688.2012.00653.x.
13. \*Hawley, R.J., B.P. Bledsoe, E.D. Stein, and \*B.E. Haines. 2012. Channel Evolution Model of Semiarid Stream Response to Urban-induced Hydromodification. *Journal of the American Water Resources Association*, 48(4):722–744; DOI: 10.1111/j.1752-1688.2012.00645.x.
14. \*Yochum, S.E., B.P. Bledsoe, G.C.L. David, and E.E. Wohl. 2012. Velocity Prediction in High-gradient Channels. *Journal of Hydrology*, 424–425:84–98, DOI:10.1016/j.jhydrol.2011.12.031.
15. Laub, B.G., \*D.W. Baker, B.P. Bledsoe, and M.A. Palmer. 2012. Range of Variability of Channel Complexity in Urban, Restored and Forested Reference Streams. *Freshwater Biology*, DOI: 10.1111/j.1365-2427.2012.02763.x.
16. \*Baker, D.W., B.P. Bledsoe, and \*J. Mueller Price. 2012. Stream Nitrate Uptake and Transient Storage over a Gradient of Geomorphic Complexity, North-central Colorado, USA. *Hydrological Processes*, 26(21):3241–3252, DOI: 10.1002/hyp.8385.
17. Sanderson, J.S., N. Rowan, T. Wilding, B.P. Bledsoe, W.J. Miller, N.L. Poff. 2011. Getting to Scale with Environmental Flow Assessment: The Watershed Flow Evaluation Tool. *River Research and Applications*, 28(9):1369–1377, DOI: 10.1002/rra.1542.

18. \*Hawley, R.J. and B.P. Bledsoe. 2011. How Do Flow Peaks and Durations Change in Suburbanizing Semi-arid Watersheds? A Southern California Case Study. *Journal of Hydrology* 405:69–82, DOI: 10.1016/j.jhydrol.2011.05.011.
19. David, G.C.L., E. Wohl, \*S.E. Yochum, and B.P. Bledsoe. 2011. Comparative Analysis of Bed Resistance Partitioning in High-gradient Streams. *Water Resources Research* 47, W07507, DOI: 10.1029/2010WR009540.
20. \*Baker, D.W., B.P. Bledsoe, \*C.M. Albano, and N.L. Poff. 2011. Downstream Effects of Diversion Dams on the Sediment and Hydraulic Conditions of Rocky Mountain Streams. *River Research and Applications*, 27(3):388–401, DOI: 10.1002/rra.1376.
21. Poff, N.L., \*M.I. Pyne, B.P. Bledsoe, \*C.O. Cuhaciyan, and D.M. Carlisle. 2010. Developing Linkages between Species Traits and Multiscaled Environmental Variation to Explore Vulnerability of Stream Benthic Communities to Climate Change. *Journal of the North American Benthological Society*, 29(4):1441–1458, DOI: 10.1899/10-030.1.
22. David, G.C.L., E. Wohl, \*S.E. Yochum, and B.P. Bledsoe. 2010. Controls on Spatial Variations in Flow Resistance along Steep Mountain Streams. *Water Resources Research*, 46, W03513, DOI: 10.1029/2009WR008134.
23. David, G.C.L., E.E. Wohl, \*S.E. Yochum, and B.P. Bledsoe. 2010. At-a-station Hydraulic Geometry of Steep Mountain Streams. *Earth Surface Processes and Landforms*, 35(15):1820–1837, DOI:10.1002/esp.2023
24. \*Matter, M.A., L.A. Garcia, D.G. Fontane, and B.P. Bledsoe. 2010. Characterizing Hydroclimatic Variability in Tributaries of the Upper Colorado River Basin – WY1911-2001. *Journal of Hydrology*, 380(3–4):260–276, DOI: 10.1016/j.jhydrol.2009.10.040.
25. Poff, N.L., B.D. Richter, A.H. Arthington, S.E. Bunn, R.J. Naiman, E. Kendy, M. Acreman, C. Apse, B. P. Bledsoe, M.C. Freeman, J. Henriksen, R.B. Jacobson, J.G. Kennen, D.M. Merritt, J.H. O’Keeffe, J.D. Olden, K. Rogers, R.E. Tharme, and A. Warner. 2010. The Ecological Limits of Hydrologic Alteration (ELOHA): A New Framework for Developing Regional Environmental Flow Standards. *Freshwater Biology*, 55(1):147–170, DOI: 10.1111/j.1365-2427.2009.02204.x.
26. David, G.C., B.P. Bledsoe, D.M. Merritt, and E.E. Wohl. 2008. The Impacts of Ski Slope Development on Stream Channel Morphology in the White River National Forest, Colorado, USA. *Geomorphology*, 103:375–388, DOI: 10.1016/j.geomorph.2008.07.003.
27. Craig, L.S., M.A. Palmer, D.C. Richardson, S. Filoso, E.S. Bernhardt, B.P. Bledsoe, M.W. Doyle, P.M. Groffman, B. Hassett, S.S. Kaushal, P.M. Mayer, S.M. Smith, and P.R. Wilcock. 2008. Stream Restoration Strategies for Reducing River Nitrogen Loads. *Frontiers in Ecology & Environment*, 6:529–538, DOI: 10.1890/070080.
28. Bledsoe, B.P., \*M.C. Brown, and \*D.A. Raff. 2007. GeoTools: A Toolkit for Fluvial System Analysis. *Journal of the American Water Resources Association*, 43(3):757–772, DOI: 10.1111/j.1752-1688.2007.00060.x.
29. Poff, N.L., B.P. Bledsoe, and \*C.O. Cuhaciyan. 2006. Hydrologic Variation with Land Use across the Contiguous United States: Geomorphic and Ecological Consequences for Stream Ecosystems. *Geomorphology*, 79:264–285, DOI: 10.1016/j.geomorph.2006.06.032.
30. \*Flores, A.N., B.P. Bledsoe, \*C.O. Cuhaciyan, E.E. Wohl. 2006. Channel-reach Morphology Dependence on Energy, Scale, and Hydroclimatic Processes with Implications for Prediction Using Geospatial Data. *Water Resources Research*, 42, W06412, DOI:10.1029/2005WR004226.



31. \*Sanborn, S.C. and B.P. Bledsoe. 2006. Predicting Streamflow Regime Metrics for Ungauged Streams in Colorado, Washington, and Oregon. *Journal of Hydrology*, 325(1–4):241–261, DOI: 10.1016/j.jhydrol.2005.10.018.
32. \*Carney, S.K., B.P. Bledsoe, and D. Gessler. 2006. Representing the Bed Roughness of Coarse-Grained Streams in Computational Fluid Dynamics. *Earth Surface Processes and Landforms*, 31:736–749, DOI: 10.1002/esp.1274.
33. \*Olden, J.D., N.L. Poff, and B.P. Bledsoe. 2006. Incorporating Ecological Knowledge into Ecoinformatics: An Example of Modeling Hierarchically Structured Aquatic Communities with Neural Networks. *Ecological Informatics*, 1:33–42, DOI:10.1016/j.ecoinf.2005.08.003.
34. Poff, N.L., \*J.D. Olden, \*D.M. Pepin, and B.P. Bledsoe. 2006. Placing Global Streamflow Variability in Geographic and Geomorphic Contexts. *River Research and Applications*, 22(2):149–166, DOI: 10.1002/rra.902.
35. Wohl, E.E., P. L. Angermeier, B.P. Bledsoe, G.M. Kondolf, L. MacDonnell, D.M. Merritt, M.A. Palmer, N.L. Poff, and D. Tarboton. 2005. River Restoration. *Water Resources Research*, 41, W10301, DOI: 10.1029/2005WR003985.
36. \*Anderson, R.J., B.P. Bledsoe, and W.C. Hession. 2004. Width of Streams and Rivers in Response to Vegetation, Bank Material, and Other Factors. *Journal of the American Water Resources Association*, 40(5):1159–1172, DOI: 10.1111/j.1752-1688.2004.tb01576.x.
37. Van den Berg, J.H. and B.P. Bledsoe. 2003. Comment on Lewin and Brewer (2001) “Predicting Channel Patterns,” *Geomorphology* 40:329-339. *Geomorphology*, 53:333–337; DOI: 10.1016/S0169-555X(02)00316-1.
38. Bledsoe, B.P. 2002. Stream Erosion Potential and Stormwater Management Strategies. *Journal of Water Resources Planning and Management*, 128(6):451–455, DOI: 10.1061/(ASCE)0733-9496(2002)128:6(451).
39. Bledsoe, B.P., C.C. Watson, and D.S. Biedenharn. 2002. Quantification of Incised Channel Evolution and Equilibrium. *Journal of the American Water Resources Association*, 38(3):861–870, DOI: 10.1111/j.1752-1688.2002.tb01002.x.
40. Watson, C.C., D.S. Biedenharn, and B.P. Bledsoe. 2002. Use of Incised Channel Evolution Models in Understanding Rehabilitation Alternatives. *Journal of the American Water Resources Association*, 38(1):151–160, DOI: 10.1111/j.1752-1688.2002.tb01542.x.
41. Bledsoe, B.P. and C.C. Watson. 2001. Effects of Urbanization on Channel Instability. *Journal of the American Water Resources Association*, 37(2):255–270, DOI: 10.1111/j.1752-1688.2001.tb00966.x.
42. Bledsoe, B.P. and C.C. Watson. 2001. Logistic Analysis of Channel Pattern Thresholds: Meandering, Braiding and Incising. *Geomorphology*, 38:281–300, PII: S.0169-555X 00 00099-4.
43. Roesner, L.A., B.P. Bledsoe, and R.W. Brashear. 2001. Are Best-Management-Practice Criteria Really Environmentally Friendly? *Journal of Water Resources Planning and Management*, 127(3):150–154, DOI: 10.1061/(ASCE)0733-9496(2001)127:3(150).
44. Bledsoe, B.P. and T.H. Shear. 2000. Vegetation along Hydrologic and Edaphic Gradients in a North Carolina Coastal Plain Creek Bottom and Implications for Restoration. *Wetlands*, 20(1):126–147, DOI: 10.1672/0277-5212(2000)020[0126:VAHAEG]2.0.CO;2.

### Peer-reviewed Book Chapters

1. Bledsoe, B.P., S.K. Carney, and R.J. Anderson. 2011. Scale-dependent Effects of Bank Vegetation on Channel Processes: Field Data, Computational Fluid Dynamics, Modeling, and Restoration Design. In S. Bennett, J. Castro, C. Thorne, and A. Simon, *The Scientific Basis for Stream Restoration in Dynamic Fluvial Systems: Deterministic Approaches, Analyses and Tools*, American Geophysical Union.
2. Booth, D.B. and B.P. Bledsoe. 2009. Streams and Urbanization. In L.A. Baker (Ed.), *The Water Environment of Cities*, ISBN: 978-0-387-84890-7, Springer-Verlag.
3. Bledsoe, B.P. 2007. Framework for Risk-based Assessment of Stream Response to Urbanization. Pages 141-156 In V. Novotny and P. Brown (Eds.), *Cities of the Future: Towards Integrated Sustainable Water and Landscape Management*, IWA Publishing, London, UK.
4. Bledsoe, B.P. 2002. Stream Responses to Hydrologic Changes. Pages 127-144 In B.R. Urbonas (Ed.), *Linking Stormwater BMP Designs and Performance to Receiving Water Impacts Mitigation*, American Society of Civil Engineers, 572 pp.

### Selected Conference Proceedings Papers, Abstracts, and Posters

1. Sholtes, J., and B. Bledsoe. 2014. On the magnitude and frequency of sediment transport in alluvial channels. Poster, EP33A-3613, American Geophysical Union Fall Meeting, San Francisco, CA, December 15-19.
2. Stephens, T., B. Fox, N. Kolden, and B.P. Bledsoe. 2014. Spatially explicit hydraulic analysis of the effects of whitewater parks on fish passage. Abstract, International Conference on Engineering and Ecohydrology for Fish Passage, University of Wisconsin, Madison, WI, June 9-11.
3. Eberhart, S.R., and B.P. Bledsoe. 2014. Developing flow-ecology relationships in southern California. Poster, 2014 Joint Aquatic Sciences Meeting “Bridging Genes to Ecosystems: Aquatic Science at a Time of Rapid Change,” Portland, OR, May 18-23.
4. Eberhart, S.R., and B.P. Bledsoe. 2014. Developing flow-ecology relationships in southern California. Abstract, *Proceedings of the 34th Annual American Geophysical Union Hydrology Days* (J.A. Ramirez, Ed.), Colorado State University, Fort Collins, CO, March 24-26.
5. Stephens, T., B. Fox, N. Kolden, and B. Bledsoe. 2014. Investigation of the effects of whitewater parks on aquatic resources in Colorado. Abstract, *Proceedings of the 34th Annual American Geophysical Union Hydrology Days* (J.A. Ramirez, Ed.), Colorado State University, Fort Collins, CO, March 24-26.
6. Federico, F., E. Stein, D. Booth, B. Bledsoe, C. Bowles, E. Berntsen, and G. Gearheart. 2012. An integrated hydromodification management framework to protect instream communities. Abstract, Society for Conservation Biology Conference, Oakland, CA, July 15-18.

7. Sanderson, J., B. Bledsoe, N. LeRoy Poff, T. Wilding, W. Miller, and N. Fey. 2012. Colorado Basin Roundtable Watershed Flow Evaluation Tool Study. Northwest Colorado Council on Governments, March.
8. Bledsoe, B.P., and E.A. Carlson. 2012. A Geomorphic Valley Classification for Fluvial Riparian Areas. Appendix E – Geomorphic Subclassification In Sanderson, J., B. Bledsoe, N. LeRoy Poff, T. Wilding, W. Miller, and N. Fey: Colorado Basin Roundtable Watershed Flow Evaluation Tool Study. Northwest Colorado Council on Governments, March, 30 p.
9. Bledsoe, B., R. Hawley, and E. Stein. 2011. Screening, Modeling, and Restoring Urban Streams Affected by Hydromodification – Part 2: Choosing Modeling Tools and Assessing Restoration Potential. Abstract 1060 presented at the ASCE Environmental and Water Resources Institute 2011 World Environmental & Water Resources Congress, “Bearing Knowledge for Sustainability,” Palm Springs, CA, May 22-26.
10. Bledsoe, B., R. Hawley, and E. Stein. 2011. Screening, Modeling, and Restoring Urban Streams Affected by Hydromodification – Part 1: Screening Tools for Assessing Susceptibility. Abstract 642 presented at the ASCE Environmental and Water Resources Institute 2011 World Environmental & Water Resources Congress, “Bearing Knowledge for Sustainability,” Palm Springs, CA, May 22-26.
11. Sengupta, A., R. Hawley, B.P. Bledsoe, and E. Stein. 2011. Screening and Prediction of Hydromodification Effects Using Artificial Neural Networks. Abstract 536 presented at the ASCE Environmental and Water Resources Institute 2011 World Environmental & Water Resources Congress, “Bearing Knowledge for Sustainability,” Palm Springs, CA, May 22-26.
12. Mueller Price, J., B.P. Bledsoe, and D.W. Baker. 2011. Investigating Temporal Variability in Nitrate Uptake in Paired Stream Reaches Due to Changes in Streamflow. Poster (ID: B33A-0421), AGU Fall Meeting, San Francisco, CA, December 5-9.
13. Hawley, R.J., B.P. Bledsoe, and E.D. Stein. 2010. Effects of Urbanization on the Flow Regimes of Semi-arid Southern California Streams. Poster (ID: H43E-1306), AGU Fall Meeting, San Francisco, CA, December 13-17.
14. Mueller Price, J., B.P. Bledsoe, and D.W. Baker. 2010. Exploring Interactions of Geomorphic Setting, Flow Variability, and Restoration on Nitrate Uptake and Transient Storage in Streams. Poster (ID: H21C-1061), AGU Fall Meeting, San Francisco, CA, December 13-17.
15. Wilding, T.K., N.L. Poff, and B.P. Bledsoe. 2010. A Generalized Habitat Model for Rocky Mountain Streams. In *Proceedings of the 30th Annual American Geophysical Union Hydrology Days* (J.A. Ramirez, Ed.), Colorado State University, Fort Collins, CO, March 22-24.
16. Yochum, S.E. and B.P. Bledsoe. 2010. Flow Resistance Estimation in High-gradient Streams. Joint Federal Interagency Conference on Sedimentation and Hydrologic Modeling (JFIC2010: 9thFISC & 4thFIHMC), Las Vegas, NV, June 27 - July 1.
17. Baker, D.W., J.M. Price, and B.P. Bledsoe. 2009. Nutrient Uptake and Transient Storage over a Gradient of Geomorphic Complexity. Abstract H41J-08, *Eos Trans. AGU*, 90(52), Fall Meet. Suppl.
18. Mueller Price, J., D.W. Baker, and B.P. Bledsoe. 2009. Can rehabilitation techniques in agricultural streams influence transient storage and nitrate uptake? Poster, AGU Fall Meeting, San Francisco, CA, December 14-18.
19. Yochum, S.E., B.P. Bledsoe, G.C.L. David, and E.E. Wohl. 2009. Characterization of Flow Resistance in High-gradient Streams. Poster, AGU Fall Meeting, San Francisco, CA, December 14-18.

20. Bledsoe, B. P. 2009. Developing a Hydrologic Foundation for Environmental Flow Management: Context-specific Applications. Abstract, *Bulletin of the North American Benthological Society (NABS 2009)*, 57th Annual Meeting, Grand Rapids, MI, May 17-22.
21. Wilding, T.K., J. Sanderson, N.L. Poff, B.P. Bledsoe, and N. Rowan. 2009. A Regional Flow Evaluation Tool for Colorado using ELOHA. Abstract, *Bulletin of the North American Benthological Society (NABS 2009)*, 57th Annual Meeting, Grand Rapids, MI, May 17-22.
22. Baker, D.W., B.P. Bledsoe, and C.M. Albano. 2009. Fine Sediment Distribution and Benthic Habitat Alteration by Small Diversion Dams on Rocky Mountain Streams. *In Proceedings of the 29th Annual American Geophysical Union Hydrology Days* (J.A. Ramirez, Ed.), Colorado State University, Fort Collins, CO, March 25-27.
23. Hawley, R.J. and B.P. Bledsoe. 2009. A Screening Tool for Assessing Channel Sensitivity to Hydromodification in Southern California. *In Proceedings of the 29th Annual American Geophysical Union Hydrology Days* (J.A. Ramirez, Ed.), Colorado State University, Fort Collins, CO, March 25-27.
24. Hawley, R.J. and B.P. Bledsoe. 2009. Long-term Effects of Urbanization on the Flow Rates and Durations of Small Streams in Southern California. *In Proceedings of the 29th Annual American Geophysical Union Hydrology Days* (J.A. Ramirez, Ed.), Colorado State University, Fort Collins, CO, March 25-27.
25. Mueller Price, J., D.W. Baker, and B.P. Bledsoe. 2009. Investigating How Natural Rehabilitation of an Agricultural Stream Can Affect Transient Storage and Nitrate Uptake. *In Proceedings of the 29th Annual American Geophysical Union Hydrology Days* (J.A. Ramirez, Ed.), Colorado State University, Fort Collins, CO, March 25-27.
26. Bledsoe, B., A. Dussaillant, E. Habit, C. Meier, O. Parra, and L. Poff. 2009. Applying the Ecological Limits of Hydrologic Alteration (ELOHA) Framework in Central and Southern Chile: Prospects and Challenges. HEIC 2009, Joint Meeting of the “7th Symposium on Ecohydraulics” and “8th Conference on Hydroinformatics,” Concepción, Chile, January 12-16.
27. Wright, S.J., O. Parra, and B.P. Bledsoe. 2008. Give and Take: The Toll on Ecosystems. Invited white paper for Sigma Xi’s *Critical Issues in Science Series 2008 “Year of Water,”* posted and available at <http://www.sigmaxi.org/programs/issues/whitepapers.shtml>; reprints disseminated at the Sigma Xi Annual Meeting & Student Research Conference, Washington, DC, November 20-23.
28. Baker, D.W., J. Mueller-Price, and B.P. Bledsoe. 2008. Deciphering Highly Variable Tracer Data from Geomorphically Complex Urban and Agricultural Streams. Abstract H33F-1063, *Eos Trans. AGU*, 89(53), Fall Meet. Suppl.
29. David, G.C., E.E. Wohl, S.E. Yochum, and B.P. Bledsoe. 2008. Characterizing Flow Resistance in Step-pool, Plane-bed and Cascade reaches, Fraser Experimental Forest, Colorado, USA. Abstract H53B-1027, *Eos Trans. AGU*, 89(53), Fall Meet. Suppl.
30. Yochum, S.E., B.P. Bledsoe, G.C. David, and E.E. Wohl. 2008. Characterization of Reach Velocity and Detailed Geometry in Well-vegetated, High-gradient Streams. Abstract H53B-1028, *Eos Trans. AGU*, 89(53), Fall Meet. Suppl.
31. Baker, D.W., J. Mueller-Price, and B.P. Bledsoe. 2008. Comparison of Stream Nitrate Uptake and Geomorphic Complexity in Agricultural and Urban Settings. Poster, *Bulletin of the North American Benthological Society*, NABS 2008, 56th Annual Meeting, Salt Lake City, UT, May 25-28.

32. Mueller-Price, J., D.W. Baker, and B.P. Bledsoe. 2008. Influences of Sudden Changes in Physical Stream Characteristics on Nitrate Uptake in an Urban Stream. Poster, *Bulletin of the North American Benthological Society*, NABS 2008, 56th Annual Meeting, Salt Lake City, UT, May 25-28.
33. Pyne, M.I., N.L. Poff, B.P. Bledsoe, and A.T. Herlihy. 2008. Estimation of Taxa Abundances Using a Bayesian Belief Network. Poster, *Bulletin of the North American Benthological Society*, NABS 2008, 56th Annual Meeting, Salt Lake City, UT, May 25-28.
34. Hawley, R.J., Bledsoe, B.P. and E. Stein. 2008. A Channel Evolution Model in Response to Urbanization in Southern California. *In Proceedings of the 28th Annual American Geophysical Union Hydrology Days* (J.A. Ramirez, Ed.), Abstract, Colorado State University, Fort Collins, CO, March 19-21.
35. Dust, D.W., R.J. Hawley, and B.P. Bledsoe. 2007. Observed Changes in Stream Morphology Due to Hydromodification in Southern California. Abstract H43D-1616, *Eos Trans. AGU*, 88(52), Fall Meet. Suppl.
36. Bledsoe, B.P., D.W. Dust, and R.J. Hawley. 2007. Regional Variability of Stream Responses to Urbanization: Implications for Risk-based Assessments. Invited Abstract H52D-03, *Eos Trans. AGU*, 88(52), Fall Meet. Suppl.
37. Baker, D.W., J. Mueller Price, and B.P. Bledsoe. 2007. A Multi-reach Comparison of Geomorphic Complexity and Hyporheic Exchange in Agricultural and Urban Streams. Abstract H41A-0125, *Eos Trans. AGU*, 88(52), Fall Meet. Suppl.
38. Mueller Price, J., D.W. Baker, and B.P. Bledsoe. 2007. Effects of a Flash Flood on Physical Stream Characteristics and Nitrate Uptake in an Urban Stream. Abstract H51B-0454, *Eos Trans. AGU*, 88(52), Fall Meet. Suppl.
39. Hawley, R.J., D.W. Dust, and B.P. Bledsoe. 2007. Channel Responses and Hydromodification in Southern California. Abstract H43D-1615, *Eos Trans. AGU*, 88(52), Fall Meet. Suppl.
40. Baker, D.W., B.P. Bledsoe, C.M. Albano, and N.L. Poff. 2007. Ecohydraulic Effects of Flow Extraction in Rocky Mountain Streams. Poster, *Bulletin of the North American Benthological Society*, 55th Annual Meeting, Columbia, SC, June 3-8.
41. Apse, C., A.H. Arthington, B.P. Bledsoe, S.E. Bunn, D. Merritt, R.J. Naiman, N.L. Poff, B. Richter, K.H. Rogers, R. Tharme, and A.T. Warner. 2007. Ecological Limits of Hydrologic Alteration: An Approach for Setting Regional Environmental Flow Standards. Special Session, *Bulletin of the North American Benthological Society*, 55th Annual Meeting, Columbia, SC, June 3-8.
42. Mueller Price, J., D.W. Baker, and B.P. Bledsoe. 2007. Variability in Nitrate Uptake and Geomorphic Complexity in Two Segments of an Urban Stream. Poster, *Bulletin of the North American Benthological Society*, 55th Annual Meeting, Columbia, SC, June 3-8.
43. Pyne, M.I., N.L. Poff, B.P. Bledsoe, and A.T. Herlihy. 2007. Traits Versus Taxonomy: Community Composition along Environmental Gradients in Streams. Poster, *Bulletin of the North American Benthological Society*, 55th Annual Meeting, Columbia, SC, June 3-8.
44. Mueller Price, J., D.W. Baker, and B.P. Bledsoe. 2007. Reconsidering Nitrate Uptake Experiments in Streams. *In Proceedings of the 24th Annual American Geophysical Union Hydrology Days* (J.A. Ramirez, Ed.), Colorado State University, Fort Collins, CO, March 19-21.

45. Baker, D.W., J. Mueller Price, and B.P. Bledsoe. 2007. The Influence of Stream Geomorphic Complexity on Hyporheic Flow Processes. *In Proceedings of the 24th Annual American Geophysical Union Hydrology Days* (J.A. Ramirez, Ed.), Colorado State University, Fort Collins, CO, March 19-21.
46. Poff, N.L., B.P. Bledsoe, and C.O. Cuhaciyen. 2006. Hydrologic Variation with Land Use Across the Contiguous United States: Geomorphic and Ecological Consequences for Stream Ecosystems. *Proceedings of the 37th International Binghamton Geomorphology Symposium* (L.A. James and W.A. Marcus, Eds.), Columbia, SC, October 20-22.
47. Mueller, J.S., D.W. Baker, and B.P. Bledsoe, 2006. Influences of Geomorphic Complexity and Rehabilitation on Nutrient Uptake in an Urban Stream. Abstract B23A-1059, *Eos Trans. AGU* 87(52), Fall Meet. Suppl.
48. Baker, D.W., B.P. Bledsoe, C.M. Albano, and N. L. Poff, 2006. Effects of Diversion Dams on the Physical and Ecological Characteristics of Rocky Mountain Streams. Abstract H51G-0567, *Eos Trans. AGU* 87(52), Fall Meet. Suppl.
49. Bledsoe, B.P. and B.S. Snyder, 2006. Predicting Flow Resistance in Mountain Streams. *In Proceedings of the 23rd Annual American Geophysical Union Hydrology Days* (J.A. Ramirez, Ed.), Colorado State University, Fort Collins, CO, March 20-22.
50. David, G., B.P. Bledsoe, D.M. Merritt, and E. Wohl, 2006. Effects of Snow-making, Grading, and Timber Harvest on Stream Channel Morphology in the White River National Forest, Colorado. *In Proceedings of the 23rd Annual American Geophysical Union Hydrology Days* (J.A. Ramirez, Ed.), Colorado State University, Fort Collins, CO, March 20-22.
51. Baker, D.W. and B.P. Bledsoe, 2006. Effects of Diversion Dams on Physical Characteristics. *In Proceedings of the 23rd Annual American Geophysical Union Hydrology Days* (J.A. Ramirez, Ed.), Colorado State University, Fort Collins, CO, March 20-22.
52. Brown, M.C., B.P. Bledsoe, and D.A. Raff, 2006. The GeoTools Shareware Package for Fluvial Systems Analysis. *In Proceedings of the 2006 World Environmental and Water Resources Congress (EWRI)* (R. Graham, Ed.), American Society of Civil Engineers, ISBN 0-7844-0856-4, Omaha, NE, May 21-25.
53. Cuhaciyen, C.O., Bledsoe, B.P., and N.L. Poff, 2006. Hydrogeomorphic Classification of Stream Insect Assemblages of the Pacific Northwest Mountains: A GIS-Based Approach. *Bulletin of the North American Benthological Society*, 54<sup>th</sup> Annual Meeting, Anchorage, AK, June 4-9.
54. Albano, C.M., N.L. Poff, D.W. Baker, and B.P. Bledsoe, 2006. Macroinvertebrate community response to streamflow diversion magnitude in Rocky Mountain streams. Presented at the *Bulletin of the North American Benthological Society*, 54<sup>th</sup> Annual Meeting, Anchorage, AK, June 4-9.
55. David, G.C., B.P. Bledsoe, D.M. Merritt, and E. Wohl. 2005. Effects of Snow-making, Grading, and Timber Harvest on Stream Channel Morphology in the White River National Forest, Colorado. *Eos Trans. AGU* 86(52), Fall Meet. Suppl., Abstract H53D-0502.
56. Rohrer, C.A., L.A. Roesner, and B.P. Bledsoe, 2004. The Effect of Stormwater Controls on Sediment Transport in Urban Streams. *In Critical Transitions in Water and Environmental Resources Management*. World Water and Environmental Resources Conference – 2004 (G. Sehlke, D.F. Hayes, and D.K. Stevens, Eds.), American Society of Civil Engineers, Salt Lake City, UT, June 28-July 1, pp. 1-13.

57. Rohrer, C.A., L.A. Roesner, and B.P. Bledsoe, 2004. The Effect of Stormwater Controls on Sediment Transport in Urban Streams. *In Proceedings of the 23rd Annual American Geophysical Union Hydrology Days* (J.A. Ramirez, Ed.), Colorado State University, Fort Collins, CO, March 31 - April 2.
58. Bledsoe, B.P., C.C. Watson, and D.S. Biedenharn. 2001. Assessment of Phosphorus Concentrations in Bank Sediments of Long Creek, MS. *ASCE Wetlands Engineering and River Restoration Conference*, Reno, NV, August 27-31.
59. Bledsoe, B.P., R.A. Anderson, B. McCaig, A.N. Flores, and C.C. Watson. 2001. Modeling Package for Assessing the Potential Effects of Land Use Change on Stream Form and Integrity. *ASCE Wetlands Engineering and River Restoration Conference*, Reno, NV, August 27-31.
60. Raff, D.A. and B.P. Bledsoe. 2001. Optimal Energy Expenditure, Discharge Skewness, and Geomorphic Effectiveness in Relation to the Area-Slope Relationship. *In Proceedings of the 21<sup>st</sup> Annual American Geophysical Union Hydrology Days* (J.A. Ramirez, Ed.), Colorado State University, Fort Collins, CO, April, 2-5.
61. Watson, C.C., B.P. Bledsoe, and D.S. Biedenharn. 2001. Specific Stream Power and a Risk-Based Design Approach. *ASCE Wetlands Engineering and River Restoration Conference*, Reno, NV, August 27-31.
62. Anderson, R.J. and B.P. Bledsoe. 2001. A Combined Analytical and Empirical Approach for Design of Stable Width in Channels with Vegetative Influences. *ASCE Wetlands Engineering and River Restoration Conference*, Reno, NV, August 27-31.
63. Bledsoe, B. P. and C.C. Watson. 2000. Regional Risk Analysis of Channel Instability Due to Land Use Change. *In Watershed Management 2000: Science and Engineering Technology for the New Millennium* (M. Flug and D. Frevert, Eds.), American Society of Civil Engineers, Fort Collins, CO, June 21-24.
64. Bledsoe, B. P. and C.C. Watson. 2000. Observed Thresholds of Stream Ecosystem Degradation in Urbanizing Areas: A Process-Based Geomorphic Explanation. *In Watershed Management 2000: Science and Engineering Technology for the New Millennium* (M. Flug and D. Frevert, Eds.), American Society of Civil Engineers, Fort Collins, CO, June 21-24.
65. Watson, C.C., B.P. Bledsoe, and D.S. Biedenharn. 2000. System-Level Analysis of Watershed Instability in the Yalobusha Basin, Mississippi. *In Watershed Management 2000: Science and Engineering Technology for the New Millennium* (M. Flug and D. Frevert, Eds.), American Society of Civil Engineers, Fort Collins, CO, June 21-24.
66. Firenzi, A.L., C.C. Watson, and B.P. Bledsoe. 2000. Stable Channel Design for Mobile Gravel Bed Rivers. *In Proceeding of the ASCE Water Resources Engineering Conference*, Minneapolis, MN, July 30 - August 2.
67. Haupt, D.M., C.J. Bruce, and B.P. Bledsoe. 1998. A Geographic Information System for Targeting Wetland Restoration. *In Wetlands Engineering and River Restoration Conference: Protecting, Restoring, and Managing the World's Water Resources*. American Society of Civil Engineers, Denver, CO, March 1998.
68. Lucas, A., E. McGee, B.P. Bledsoe, and L. Xu. 1996. Development of the Use Restoration Waters Program. *In Watershed 96 - Moving Ahead Together*, Technical Conference and Exposition, Baltimore, MD, June 8-12.

69. Bledsoe, B. P., J. E. Wuenschel, and L. A. Sutter. 1995. Identifying and Prioritizing Potential Wetland Restoration Sites in the Coastal Plain of North Carolina, *In Proceedings of the National Interagency Workshop on Wetlands: Technology Advances for Wetlands Science*. Technical Report, Wetlands Research and Technology Center, USACE Waterways Experiment Station, Vicksburg, MS.
70. Bledsoe, B. P. and T.H. Shear. 1995. Relationships Between Hydrologic Factors and Plant Community Types with Implications for Swamp Restoration, *In Proceedings of the National Interagency Workshop on Wetlands: Technology Advances for Wetlands Science*. Technical Report, Wetlands Research and Technology Center, USACE Waterways Experiment Station, Vicksburg, MS.
71. Shear, T.H., and B. P. Bledsoe. 1993. Relationships between plant communities, microtopography, and hydrology and implications for swamp restoration and creation. *In Proceedings of the Conference on Engineering for Wetlands Restoration*, U.S. Army Corps of Engineers, St. Louis, MO.

### **Selected Reports**

1. Bledsoe, B., D. Baker, P. Nelson, and R. Hawley. 2014. Design Hydrology for Stream Restoration and Channel Stability at Stream Crossings. National Cooperative Highway Research Program (NCHRP), Interim Report Contract Period: July 22, 2013 through September 30, 2014, 88 p. [plus four quarterly and twelve monthly progress reports submitted in 2014].
2. Bledsoe, B.P., B.D. Fox, T.A. Stephens, E. Kolden, and E.R. Ryan. 2014. Investigation of the Effects of Whitewater Parks on Aquatic Resources in Colorado. Colorado Water Conservation Board, September, 112 p.
3. Beeby, J., B. Bledsoe, and K. Hardie. 2014. Colorado River in Eagle County Inventory and Assessment. Eagle River Watershed Council, June, 227 p.
4. Bledsoe, B.P. and others on the Ecological Response Modeling Team. 2014. An Ecological Response Model for the Cache la Poudre River through Fort Collins. Report prepared for the City of Fort Collins, November, 140 pp.
5. Stein, E.D. and B.P. Bledsoe. 2013. Modeling and Managing Hydromodification Effects: Summary of Available Tools and Decision-making Approach. Southern California Coastal Water Research Project (SCCWRP), Costa Mesa, CA, November, 72 pp. + Appendix.
6. Bledsoe, B.P., J.C. Beeby, and K.W. Hardie. 2013. Evaluation of Flushing Flows in the Fraser River and Its Tributaries. Colorado Trout Unlimited, September, 197 pp. + Appendix G.
7. Bledsoe, B.P., E. Kolden, B. Fox, and T. Stephens. 2013. Investigation of the Effects of Whitewater Parks on Aquatic Resources in Colorado. Colorado Water Conservation Board, September, 63 pp.
8. Bledsoe, B.P. and J.C. Beeby. 2013. Herbert Hoover National Historic Site. Chapter for the National Park Service (NPS), Natural Resource Condition Assessments (NRCA), Center for Environmental Management of Military Lands (CEMML), August, 9 pp.
9. Bledsoe, B.P. and J.C. Beeby. 2013. Homestead National Monument. Chapter for the National Park Service (NPS), Natural Resource Condition Assessments (NRCA), Center for Environmental Management of Military Lands (CEMML), August, 7 pp.
10. Bledsoe, B.P. and J.C. Beeby. 2013. Pipestone National Monument. Chapter for the National Park Service (NPS), Natural Resource Condition Assessments (NRCA), Center for Environmental Management of Military Lands (CEMML), August, 7 pp.



11. Bledsoe, B.P. and J.C. Beeby. 2013. Tallgrass Prairie National Preserve. Chapter for the National Park Service (NPS), Natural Resource Condition Assessments (NRCA), Center for Environmental Management of Military Lands (CEMML), August, 14 pp.
12. Stein, E.D., F. Federico, D.B. Booth, B.P. Bledsoe, C. Bowles, Z. Rubin, G.M. Kondolf, and A. Sengupta. 2012. Hydromodification Assessment and Management in California. Southern California Coastal Water Research Project (SCCWRP), Technical Report #667, Costa Mesa, CA, April, 138 pp.
13. Beeby, J., P. Kulchawik, and B. Bledsoe. 2012. Assessments and Rehabilitation Decision-making Framework for the Streams of Fort Collins. Report prepared for the City of Fort Collins Stormwater Division, Fort Collins, CO.
14. Bledsoe, B.P. 2011. CAREER: Stream Restoration, Ecological Engineering, and Nutrient Retention of Streams in Urban and Agricultural Settings. National Science Foundation Annual Report (Award ID: 0548258), Final Report, November.
15. Baker, D.W. and B.P. Bledsoe. 2011. Probabilistic Sampling and Study Design in Riparian Monitoring Technical Guide for the Western US. D. M. Merritt (Ed.), U.S. Forest Service, Rocky Mountain Research Station, Fort Collins, CO.
16. Booth, D.B., S.R. Dusterhoff, E.D. Stein, and B.P. Bledsoe. 2010. Hydromodification Screening Tools: GIS-based Catchment Analyses of Potential Changes in Runoff and Sediment Discharge. Technical Report #605, Southern California Coastal Water Research Project (SCCWRP), Costa Mesa, CA.
17. Bledsoe, B.P., R.J. Hawley, E.D. Stein, and D.B. Booth (2010). Hydromodification Screening Tools: Field Manual for Assessing Channel Susceptibility. Technical Report #606, Southern California Coastal Water Research Project (SCCWRP), Costa Mesa, CA.
18. Bledsoe, B.P. 2009. CAREER: Stream Restoration, Ecological Engineering, and Nutrient Retention of Streams in Urban and Agricultural Settings. National Science Foundation Annual Report (Award ID: 0548258), Annual Report for Period: February 2009 - January 2010, December.
19. Bledsoe, B., R. Hawley, and E.D. Stein. 2009. Hydromodification Screening Tool for Southern California for Field Testing/TAC Review. Southern California Coastal Water Research Project (SCCWRP), Costa Mesa, CA, November, 36 pp.
20. Bledsoe, B., R. Hawley, and E.D. Stein. 2008. Stream channel classification and mapping systems: Implications for assessing susceptibility to hydromodification effects in southern California. Southern California Coastal Water Research Project (SCCWRP), Technical Report #562, Costa Mesa, CA, April 30, 38 pp.
21. Bledsoe, B.P. 2008. CAREER: Stream Restoration, Ecological Engineering, and Nutrient Retention of Streams in Urban and Agricultural Settings. National Science Foundation Annual Report (Award ID: 0548258), Annual Report for Period: February 2008 - January 2009, December 23, 2008.
22. Poff, N.L., B.P. Bledsoe, and D. Dean. 2008. Linking Watershed Characteristics with Flow Regime and Geomorphic Context to Diagnose Water Quality Impairment at Multiple Spatiotemporal Scales. Report to the U.S. Environmental Protection Agency, EPA Grant Number R831367.
23. Bledsoe, B.P. 2008. Grantee Final Report, U.S. Scholar Fulbright Program. Report to the Council for International Exchange of Scholars, Grant dates February - June.

24. Bledsoe, B.P., R. Hawley and E. Stein. 2008. Channel Classification and Mapping Systems with Implications for Assessing Susceptibility to Hydromodification in Southern California. Report to the Southern California Coastal Water Research Project, Costa Mesa, CA, February, 38 p.
25. Raff, D.A., Bledsoe, B.P., A.N. Flores, and M.C. Brown. 2007. GeoTool User's Manual. Version 4 Report for posting on the Internet, July, 93 pp. + app.
26. Bledsoe, B. P., and J. Meyer. 2006. Monitoring of the Little Snake River and Tributaries, Year 5 – Final Report. Report to Three Forks Ranch Corporation and Porzak, Browning, and Bushong LLP, Boulder, CO, November, 38 pp. + app.
27. Bledsoe, B., J. Meyer, E. Holburn, C. Cuhaciyani, S. Earsom, and B. Snyder. 2005. Eagle River Inventory and Assessment. Final Report to the Eagle River Watershed Council, Colorado Dept. of Public Health and Environment, and Great Outdoors Colorado, 550 pp. + app.
28. Bledsoe, B.P., and J. Meyer. 2004. Monitoring of the Little Snake River and Tributaries, Year 4. Report to Three Forks Ranch Corporation and Porzak, Browning, and Bushong LLP, Boulder, CO, November, 32 pp. + app.
29. Bledsoe, B.P., D.A. Raff, and A.N. Flores. 2004. GeoTool User's Manual. Final Report Submitted to U.S. Army Corps of Engineers, Engineering Research and Development Center Vicksburg, MS, 88 pp. + app.
30. Bledsoe, B.P., and S.K. Carney. 2003. Monitoring of the Little Snake River and Tributaries, Year 3. Report to Three Forks Ranch Corporation and Porzak, Browning, and Bushong LLP, Boulder, CO, November, 30 pp. + app.
31. Bledsoe, B.P., and R.J. Anderson. 2002. Geomorphic Assessment of the Big Sandy River Downstream of Farson, Wyoming. Final Report to the U.S. Department of Interior, Bureau of Reclamation, 50 pp. + app.
32. Roesner, L.A., and B.P. Bledsoe. 2002. Physical Effects of Wet Weather Flows on Aquatic Habitats – Present Knowledge and Research Needs. Final Report to Water Environment Research Foundation, WERF Project Number 00-WSM-4, 250 pp.
33. Bledsoe, B.P., R.J. Anderson, S.K. Carney, C.C. Watson. 2002. Monitoring of the Little Snake River and Tributaries, Year 2. Report to Three Forks Ranch Corporation and Porzak, Browning, and Bushong LLP, Boulder, CO, August, 21 p. + app.
34. Bledsoe, B.P., R.J. Anderson, and C.C. Watson. 2001. Monitoring of the Little Snake River and Tributaries. Report Submitted to Three Forks Ranch Corporation, August.
35. Bledsoe, B.P., K.A. O'Connor, C.C. Watson, and K.H. Carlson. 2000. Phosphorus Content of Streambed, Bank, and Upland Sediments: Long Creek and Johnson Creek Watersheds, Mississippi. Report Submitted to the U.S. Army Corps of Engineers Waterways Experiment Station, Vicksburg, MS, November.
36. Battikhi, A., B.P. Bledsoe, C.C. Watson. 2000. Benefits of Stream Stabilization in the Yazoo River Basin, Mississippi. Report Submitted to the U.S. Army Corps of Engineers Waterways Experiment Station, Vicksburg, MS, November .
37. Watson, C.C, B.P. Bledsoe, and C.I. Thornton. 2000. Demonstration Erosion Control Monitoring Sites 1999 Evaluation. Submitted to the U.S. Army Corps of Engineers Waterways Experiment Station, Vicksburg, MS, 156 pp., October.

38. Watson, C.C and B.P. Bledsoe. 1999. Demonstration Erosion Control Monitoring Sites 1998 Evaluation. Submitted to the U.S. Army Corps of Engineers Waterways Experiment Station, Vicksburg, MS, 157 pp., June.
39. Watson, C.C., B.P. Bledsoe, and P.B. Kozinski. 1998. Yalobusha Basin Geomorphic Assessment. Submitted to the U.S. Army Corps of Engineers Waterways Experiment Station, Vicksburg, MS, 64 pp., October.
40. Watson, C.C., C.I. Thornton, P.B. Kozinski, B.P. Bledsoe, et al. 1998. Demonstration Erosion Control Monitoring Sites 1997 Evaluation. Submitted to the U.S. Army Corps of Engineers Waterways Experiment Station, Vicksburg, MS, 129 pp., July.
41. Bledsoe, B. P., D. M. Haupt, L. A. Sutter, and J. E. Wuenschel. 1997. A Geographic Information System for Targeting Wetland Restoration. North Carolina Department of Environment, Health, and Natural Resources, Division of Coastal Management, 93 pp.
42. Co-author. 1997. Neuse River Nutrient Sensitive Waters Management Strategy: Concept Paper, Fiscal Analysis, Accountability Structure, and Report of Proceedings. North Carolina Department of Environment, Health, and Natural Resources, Division of Water Quality, 718 pp.
43. Co-author. 1997. Neuse River Basinwide Management Plan. North Carolina Department of Environment, Health, and Natural Resources, Division of Water Quality.

### **Selected Presentations**

1. Invited as O. T. Hayward Distinguished Speaker, Baylor University, Waco, TX. Two invited presentations planned on urban streams and fluvial geomorphology, to be presented on April 8 and 9, 2015.
2. Delivered keynote address entitled “Addressing Key Uncertainties in Stream Restoration Projects” at EcoStream 2014 – Stream Ecology and Restoration Conference, North Carolina State University, Charlotte, NC, November 17-20, 2014. Presented ideas for restoring bio-geochemical function in stream restoration projects.
3. Taught (with Dr. E. Wohl) 3-day short course co-hosted by the Colorado Riparian Association (CRA) and Colorado Association of Stormwater and Floodplain Managers (CASFM) “Applied Fluvial Geomorphology for an Urbanizing World,” Sylvan Dale Guest Ranch, Loveland, CO, November 13-15, 2014. The course focused on applying the concepts and principles of fluvial geomorphology to develop an understanding of approaches and methods for using geomorphology in stream restoration.
4. Invited presentation for the “Poudre River – A Poudre Runs Through It” program organized by the Water Center at Colorado State University, October 21, 2014.
5. Delivered keynote address entitled “Resilient and Rambunctious Floodplains” at the 25th Annual Colorado Association of Stormwater and Floodplain Managers (CASFM) Conference “25 Years Managing the Elements,” Vail, CO, October 1, 2014.
6. Presentation at the Colorado Basin Roundtable meeting, Glenwood Springs, CO, July 28, 2014.
7. Presentation at the 14th American Ecological Engineering Society Meeting “Designing for Resilience in a Changing World,” Charleston, SC, June 9-11, 2014.
8. Keynote speaker at the Colorado Association of Stormwater & Floodplain Manager (CASFM), Loveland, CO, May 8, 2014. Discussed flooding, adaptive management, and development of a new CASFM course that focuses on ecology and biology in stream restoration.

9. Presented at co-sponsored CSU River Retreat at Tamasag Retreat Center, Bellevue, CO, February 22, 2014.
10. Presentation on flood risks in Fountain Creek during a public meeting, Manitou Springs, CO, January 8, 2014.
11. Presentation (co-authors B. Fox, M. Kondratieff, and C. Myrick) entitled “Eco-Hydraulic Evaluation of Whitewater Parks as Fish Passage Barriers” at the International Conference on Engineering and Ecohydrology for Fish Passage, Oregon State University, Corvallis, OR, June 25-27, 2013.
12. Presented “Let’s Be Honest: Addressing Key Uncertainties in Stream Restoration Design and Decision-making” at the 2013 American Geophysical Union Hydrology Days, Colorado State University, Fort Collins, CO, March 25-27, 2013.
13. Presentation (co-authors K. Werbylo and J. Sholtes) entitled “A Consideration of Channel Morphology, Flow Regime Variability and Sediment Transport Relations in Determining Effective Discharge” at the 2013 American Geophysical Union Hydrology Days, Colorado State University, Fort Collins, CO, March 25-27, 2013.
14. Delivered keynote address entitled “Let’s Be Honest: Addressing Uncertainty in River Restoration and Decision-making” at the River Restoration Northwest (RRNW) Annual Symposium, Stevenson, WA, February 4-6, 2013.
15. Invited presentation to agency personnel from the Eagle River Watershed Council, Eagle, CO, November 7, 2012.
16. Invited presentation at the 7th Annual Sustaining Colorado Watersheds Conference – “Water 2012.” The Sustaining Colorado Watersheds Conference is a cooperative event that is presented by The Colorado Watershed Assembly, The Colorado Riparian Association, and the Colorado Foundation for Water Education, Avon, CO, October 10, 2012.
17. Invited (by the U. S. Fish and Wildlife Service) participant presentation for the Long-range Plan of San Juan River Basin Recovery Implementation Program (SJRRIP), Albuquerque, NM, January 10-12, 2012.
18. Invited to present “Effects of Bank Vegetation on Stream Processes: Field Data, CFD Modeling and Restoration Design” at the 6<sup>th</sup> Annual Sustaining Colorado Watersheds Conference, Colorado Watershed Assembly, Avon, CO, October 5, 2011.
19. Invited panelist for the CSU – School of Global Environmental Sustainability Panel – Expert Panel on extreme events, Fort Collins, CO, November 17, 2010.
20. Invited to present at the “Sediment Supply and the Upland Stream Connection” during the Episodic Streams: Imperatives for Assessment and Environmental Planning in California Workshop sponsored by the Southern California Coastal Water Research Project (SCCWRP), Santa Ana, CA, November 7-9, 2010.
21. Invited to present at the U.S. Environmental Protection Agency “Healthy Watersheds Integrated Assessments Workshop,” Estes Park, CO, November 3, 2010.
22. Invited lecturer and panelist at the “Sustaining Colorado Watersheds 2010: Learning from the Past to Protect the Future” conference, Vail, CO, October 5-6, 2010.
23. Presented invited paper entitled Model and Translating Models to Management Tools at the Hydromodification: Latest Advances and Pending Challenges Workshop. Workshop was held

- during the 2009 California Stormwater Quality Association (CASQA) Conference, San Diego, CA, November 1-3, 2009.
24. Taught courses, developed academic curricula, advised students, conducted research, and lectured at the Centro EULA de Chile, Universidad de Concepción in Chile in fulfillment of the Fulbright Scholar Grant, February - June 2008.
  25. Presented invited presentation on Environmental Flows (Non-consumptive Needs Assessments), during the Colorado Basin Roundtables in Glenwood Springs, Colorado, on December 17, 2007.
  26. Presented invited paper entitled Regional Variability of Stream Responses to Urbanization: Implications for Risk-based Assessments, at the AGU Fall Meeting, San Francisco, California, December 12-14, 2007.
  27. David, G.C., B.P. Bledsoe, D.M. Merritt, and E. Wohl. 2007. Poster: Effects of Snow-making, Grading, and Timber Harvest on Stream Channel Morphology in the White River National Forest, Colorado. Boulder Climate Workshop, Boulder, CO.
  28. Mueller Price, J., D.W. Baker, and B.P. Bledsoe. 2007. Reconsidering Nitrate Uptake Experiments in Streams. 24th Annual American Geophysical Union Hydrology Days, Colorado State University, Fort Collins, CO.
  29. Baker, D.W., J. Mueller Price, and B.P. Bledsoe. 2007. The Influence of Stream Geomorphic Complexity on Hyporheic Flow Processes. 24th Annual American Geophysical Union Hydrology Days, Colorado State University, Fort Collins, CO.
  30. Baker, D.W., B.P. Bledsoe, C.M. Albano, and N.L. Poff. 2007. Ecohydraulic Effects of Flow Extraction in Rocky Mountain Streams. Poster, North American Benthological Society, 55th Annual Meeting, June 3-8, Columbia, SC.
  31. Apse, C., A.H. Arthington, B.P. Bledsoe, S.E. Bunn, D. Merritt, R.J. Naiman, N.L. Poff, B. Richter, K.H. Rogers, R. Tharme, and A.T. Warner. 2007. Ecological Limits of Hydrologic Alteration: An Approach for Setting Regional Environmental Flow Standards. Special Session, North American Benthological Society, 55th Annual Meeting, June 3-8, Columbia, SC.
  32. Mueller Price, J., D.W. Baker, and B.P. Bledsoe. 2007. Variability in Nitrate Uptake and Geomorphic Complexity in Two Segments of an Urban Stream. Poster, North American Benthological Society, 55th Annual Meeting, June 3-8, Columbia, SC.
  33. Pyne, M.I., N.L. Poff, B.P. Bledsoe, and A.T. Herlihy. 2007. Traits Versus Taxonomy: Community Composition along Environmental Gradients in Streams. Poster, North American Benthological Society, 55th Annual Meeting, June 3-8, Columbia, SC.
  34. Bledsoe, B.P. 2006. Invited Keynote Speaker: Innovations in Urban Development. Invited Keynote Speaker at the Cochrane Low Impact Development Conference, sponsored by the Cochrane Environmental Action Committee (CEAC), Cochrane, Alberta, Canada, October 18-20.
  35. Invited Panelist / Speaker at The Nature Conservancy's International Environmental Flows Workshop in Half Moon Bay, CA, August 6-9, 2006.
  36. Invited Speaker at the NSF-funded Wingspread Workshop on Urban Water: Cities of the Future: Creating Blue Water in Green Cities, in Racine, WI, July 12-14, 2006.
  37. Bledsoe, B.P. 2005. Risk-Based Channel Stability Analysis for Urbanizing Watersheds. Invited Presentation to the California Stormwater Quality Association 2005 Conference, Ontario, CA, October 3-5.

38. Bledsoe, B.P. and N.L. Poff. 2005. Hydrogeomorphic Classification and Functional Composition of Benthic Communities in the Pacific Northwest Mountains. Joint Assembly of the American Geophysical Union and North American Benthological Society, New Orleans, LA, May 23-27.
39. Cuhaciyan, C.O., B.P. Bledsoe, J.D. Olden, and N.L. Poff. 2005. Hydrogeomorphic Classification of Benthic Macroinvertebrate Assemblages in the Pacific Northwest Mountains. Joint Assembly of the American Geophysical Union and North American Benthological Society, New Orleans, LA, May 23-27.
40. Holburn, E.R., C.O. Cuhaciyan, B.P. Bledsoe, and N.L. Poff. 2005. Explanatory Power of Multi-scale Physical Descriptors in Modeling Benthic Indices Across Nested Ecoregions of the Pacific Northwest. Joint Assembly of the American Geophysical Union and North American Benthological Society, New Orleans, LA, May 23-27.
41. Hurst, B.E., B.P. Bledsoe, C.M. Albano, and N.L. Poff. 2005. Conditional Probability Approach for Assessing Fine Sediment Impacts on Aquatic Insects. Joint Assembly of the American Geophysical Union and North American Benthological Society, New Orleans, LA, May 23-27.
42. Albano, C.M., B. E. Hurst, N.L. Poff, and B.P. Bledsoe. 2005. The independent and interactive effects of reduced streamflow and fine sediment deposition on macroinvertebrate community structure and function. Joint Assembly of the American Geophysical Union and North American Benthological Society, New Orleans, LA, May 23-27.
43. Olson, K.D., B.P. Bledsoe, and C.O. Cuhaciyan. 2005. An Adaptive GIS Algorithm for Neighborhood Analysis of Hydrologic Networks, presented at the 18th annual GIS in the Rockies Conference, Denver, Colorado. Poster Award, 1<sup>st</sup> Place.
44. Meyer, J. and B.P. Bledsoe. 2005. A River Restoration Case Study: Three Forks of the Little Snake River, Colorado. 25th Annual American Geophysical Union Hydrology Days, Colorado State University, Fort Collins, CO.
45. Olson, K.D., C.O. Cuhaciyan, and B.P. Bledsoe. 2005. Mapping Stream Habitat Heterogeneity Using a Flexible Neighborhood Analysis Algorithm. 25th Annual American Geophysical Union Hydrology Days, Colorado State University, Fort Collins, CO.
46. Hurst, B.E. and B.P. Bledsoe. 2005. A Probabilistic Approach for Assessing Effects of Deposited Fine Sediment on Aquatic Insects. 25th Annual American Geophysical Union Hydrology Days, Colorado State University, Fort Collins, CO.
47. Cuhaciyan, C.O., J.D. Olden, B.P. Bledsoe, and N.L. Poff. 2005. Multi-Scale Environmental Filters of Benthic Invertebrate Communities in Mountainous Ecoregions of Oregon and Washington. 25th Annual American Geophysical Union Hydrology Days, Colorado State University, Fort Collins, CO.
48. Holburn, E.R., B.P. Bledsoe, C.O. Cuhaciyan, and N.L. Poff. 2005. Scale-dependent Relevance of Watershed, Valley, and Reach Descriptors to Benthic Indices Across Nested Ecoregions of the Pacific Northwest. 25th Annual American Geophysical Union Hydrology Days, Colorado State University, Fort Collins, CO.
49. Raff, D.A. and B.P. Bledsoe. 2004. Geomorphology Toolbox for Assessing the Potential Effects of Land-use Change and Management Practices on Stream Form and Integrity. American Geophysical Union Fall Meeting, San Francisco, CA.
50. Carney, S.K., B.P. Bledsoe, D. Gessler. 2004. Computational Fluid Dynamics Investigation of the Influence of Bank Vegetation on Open Channel Flow. AWRA Summer Specialty Conference, Riparian Ecosystems and Buffers: Multi-Scale Structure, Function, and Management, Olympic Valley, CA.

51. Poff, N.L., B.P. Bledsoe, J.D. Olden, and C.O. Cuhaciyan. 2004. Constructing a hierarchical filtering model to predict functional composition of benthic communities across multi-scaled environmental gradients. North American Benthological Society Annual Meeting, Vancouver, British Columbia.
52. Bledsoe, B.P., D.A. Raff. 2004. GeoTool: A Modeling Toolbox for Geomorphic Analysis. Proceedings of the 24th Annual American Geophysical Union Hydrology Days (J.A. Ramirez, Ed.), Colorado State University, Fort Collins, CO.
53. Carney, S.K., B.P. Bledsoe. 2004. Representing the Bed Roughness of Gravel Bed Rivers in Computational Fluid Dynamics. Proceedings of the 24th Annual American Geophysical Union Hydrology Days (J.A. Ramirez, Ed.), Colorado State University, Fort Collins, CO.
54. Meyer, J., C.O. Cuhaciyan, B.P. Bledsoe. 2004. A Geomorphic Assessment of the Eagle River at Camp Hale. Proceedings of the 24th Annual American Geophysical Union Hydrology Days (J.A. Ramirez, Ed.), Colorado State University, Fort Collins, CO.
55. Sanborn, S.C., B.P. Bledsoe. 2004. Predicting Flow Regime for Ungauged Streams in CO, WA, and OR. Proceedings of the 24th Annual American Geophysical Union Hydrology Days (J.A. Ramirez, Ed.), Colorado State University, Fort Collins, CO.
56. Cuhaciyan, C.O., S.C. Sanborn, B.P. Bledsoe. 2004. Mapping Aquatic Habitat Characteristics in Stream Networks. Proceedings of the 24th Annual American Geophysical Union Hydrology Days (J.A. Ramirez, Ed.), Colorado State University, Fort Collins, CO.
57. Poff, N.L., J.D. Olden, B.P. Bledsoe. 2004. Using ecoinformatics tools to model hierarchically-structured aquatic ecosystems with implications for conservation. Fourth Conference of the International Society for Ecological Informatics in Busan (Pusan), Korea, October 24-28.
58. Rohrer, C.A., L. A. Roesner, B.P. Bledsoe. 2004. The Effect of Stormwater Controls on Sediment Transport in Urban Streams. ASCE World Water Congress 2004-Critical Transitions in Water and Environmental Resources Management (G. Sehlke, D.F. Hayes, and D.K. Stevens, Eds.), Salt Lake City, UT, June 27 - July 1.
59. Bledsoe, B.P., Flores, A.N., Sanborn, S.C., and Cuhaciyan, C.O. 2003. Multi-scale Factors Influencing Stream Substrate Size Within and Among Watersheds. American Geophysical Union Fall Meeting, San Francisco, CA.
60. Cuhaciyan, C.O., Sanborn, S.C., and Bledsoe, B.P. 2003. Mapping Stream Hydrogeomorphic and Disturbance Regimes throughout Drainage Networks. American Geophysical Union Fall Meeting, San Francisco, CA.
61. Bledsoe, B.P., Flores, A.N., Poff N.L., and Cuhaciyan, C.O. 2003. Prediction of Local Stream Habitat Attributes with Spatial Analysis of Watershed-Scale Data. Bulletin of the North American Benthological Society 20(1):382, 51st Annual Meeting, Athens, GA.
62. Poff, N.L., Bledsoe, B.P., Olden, J.D., and Flores, A.N. 2003. Functional organization of benthic macroinvertebrate communities along multi-scale environmental gradients. Bulletin of the North American Benthological Society 20(1):185, 51st Annual Meeting, Athens, GA.
63. Carney, S.K., Bledsoe, B.P., and Gessler, D. 2003. Shear stress distributions in streams with high bank roughness. *Proceedings of the 23rd Annual American Geophysical Union Hydrology Days* (J.A. Ramirez, Ed.), Colorado State University, Fort Collins, CO.
64. Flores, A.N. and Bledsoe, B.P. 2003. Depicting channel reaches at sub-link scales using digital elevation models. *Proceedings of the 23rd Annual American Geophysical Union Hydrology Days* (J.A. Ramirez, Ed.), Colorado State University, Fort Collins, CO.

65. Sanborn, S.C. and Bledsoe, B.P. 2003. Predicting Flow Regime for Ungauged Streams in the Western United States. *Proceedings of the 23rd Annual American Geophysical Union Hydrology Days* (J.A. Ramirez, Ed.), Colorado State University, Fort Collins, CO.
66. Cuhaciyan, C.O., Sanborn, S.C., and Bledsoe, B.P. 2003. Predicting Bed Material in Stream Networks. *Proceedings of the 23rd Annual American Geophysical Union Hydrology Days* (J.A. Ramirez, Ed.), Colorado State University, Fort Collins, CO.
67. Poff, N.L., J.D. Olden, D.M. Pepin, B.P. Bledsoe. 2003. Placing Global Streamflow Variability in Geographic and Geomorphic Contexts. Ninth International Conference on River Research and Applications (NISORS), July 6-11, New South Wales, Australia.
68. Bledsoe, B.P. 2003. Stream Restoration and Water Quality. Colorado Nonpoint Source Forum, Glenwood Springs, CO.
69. Flores, A.N., and Bledsoe, B.P. 2002. Application of Hack's Law to Predict In-channel Features of Ecological Interest with Coarse Scale Watershed Variables. *Proceedings of the 22nd Annual American Geophysical Union Hydrology Days* (J.A. Ramirez, Ed.), Colorado State University, Fort Collins, CO, April 1-4, 2002.
70. Bledsoe, B.P. 2002. Energy-Based Indicators of Network Structure and Channel Stability: Status and Prospect. *Proceedings of the 22nd Annual American Geophysical Union Hydrology Days* (J.A. Ramirez, Ed.), Colorado State University, Fort Collins, CO, April 1-4, 2002.
71. Flores, A.N., and Bledsoe, B.P. 2002. Watershed-Scale Implications of Hack's Slope-Drainage Area Relationship and Application to the Prediction of In-Channel Features of Ecological Interest. Geological Society of America 2002 Annual Meeting, Denver, CO, October 27-30.
72. Bledsoe, B., E. Wohl, P. Pizzi, K. Sable, A. Flores, C. Cuhaciyan, and S. Sanborn. 2002. Hydrogeomorphic Classification of Western Streams for Ecological Assessment. American Geophysical Union Fall Meeting, San Francisco, CA, December 6-10.
73. Flores, A. N. and B.P. Bledsoe 2002. Investigating Spatial Variability in Channel Slope and Flow Energy Within and Among Watersheds. American Geophysical Union Fall Meeting, San Francisco, CA, December 6-10.
74. Bledsoe, B.P., N.L. Poff, and E.E. Wohl. 2002. Multi-scale classification of western streams. Presented at the 2002 EMAP Symposium: The Condition of Our Nation's Streams and Rivers from the Mountains to the Coast, Kansas City, Missouri, May 7-9.
75. Bledsoe, B.P. 2001. Invited Presentation to USEPA Workshop on Reference Conditions for Western Streams and Rivers, Phoenix, AZ, February 13-15.
76. Bledsoe, B.P. 2001. Invited Presentation to United Engineering Foundation Conference on Linking Stormwater BMP Designs and Performance to Receiving Water Impacts Mitigation. Wetlands 2001 Wetlands Engineering and River Restoration, Snowmass, CO, August 19-24.
77. Bledsoe, B.P., C.C. Watson, and D. Biedenharn. 2001. Assessment of Phosphorus Concentrations in Bank Sediments of Long Creek, MS. ASCE Wetlands Engineering and River Restoration Conference 2001 Proceedings (D. F. Hayes, Ed.), Reno, NV, August 27-31.
78. Bledsoe, B.P. 2000, 2001. Stream Corridor Restoration: Functions, Dynamic Equilibrium, and Human Impacts. Invited Workshop Presentation for the U.S. Environmental Protection Agency – Region 8, Denver, CO.
79. Bledsoe, B.P. 1999. Linking Fluvial Geomorphology and the Clean Water Act. Invited Presentation to the Colorado Department of Public Health and Environment, Denver, CO.



80. Bledsoe, B.P. 1998. Linking Fluvial Geomorphology and the Clean Water Act. Invited Presentation to the Colorado Department of Public Health and Environment, Denver, CO.
81. Bledsoe, B.P., B. A. McGee, and A. M. Lucas. 1996. The Use Restoration Waters Program in North Carolina. Presentation to the American Water Resources Assoc. Conference on *Watershed Restoration Management: Physical, Chemical, and Biological Considerations*. Syracuse, NY.
82. Bledsoe, B.P. 1992. Relationships Between Hydrologic Regimes and Plant Community Types: Applications in Creating and Restoring Forested Wetlands. Presentation to the Society for Ecological Restoration Annual Conference, Waterloo, Ontario, Canada.

## **SERVICE AND PROFESSIONAL ACTIVITIES**

- Co-Director, Program of Research and Scholarly Excellence (PRSE) – Water Science for Environmental Sustainability (2012-present)
- Advising Faculty Member in interdisciplinary graduate degree programs at CSU:
  - Graduate Degree Program in Ecology (GDPE):
    - Executive Committee (2011-present)
    - Advising Faculty Member (2007-present)
  - Integrated Water, Atmosphere, Ecosystems, Education and Research (I-WATER) funded by the National Science Foundation Integrative Graduate Education and Research Traineeship (I-GERT) program:
    - Advising Faculty Member (2012-present)
- Fulbright Committee, Office of International Programs, Colorado State University
- School of Global Environmental Sustainability Curriculum Committee, Colorado State University
- Co-founder and Faculty Advisor of Engineers Without Borders CSU Chapter (2004-2009)
- Member of the American Society of Civil Engineers
- Member of the American Geophysical Union
- Member of the American Water Resources Association
- Member of the American Society for Engineering Education (2012)
- Member of the American Ecological Engineering Society
- Reviewer for *Water Resources Research*, *Journal of Hydraulic Engineering*, *Journal of Hydrologic Engineering*, *Journal of the American Water Resources Association*, *Journal of Water Resources Planning and Management*, *Freshwater Biology*, *Journal of the North American Benthological Society*, *Journal of Environmental Quality*, *Journal of Hydrology*, *Hydrological Sciences Journal*, *Geomorphology*, and John Wiley & Sons
- Invited (by the U. S. Fish and Wildlife Service) participant for the Long-range Plan of San Juan River Basin Recovery Implementation Program (SJRRIP) (2012)
- Invited Panelist during the CSU Global Water Research Colloquium “From Conflict to Sustainability: Challenges and Opportunities in an Interdependent World” sponsored by the CSU Vice President for Research, the Office for International Programs, and the CSU Water Center (2012)
- Invited Member of Scientific Advisory Board on Suspended and Bedded Sediments for the U.S. Environmental Protection Agency – Office of Water
- Invited Panelist for Peer-Review of the Environmental Monitoring and Assessment Program (EMAP) Research Strategy for the U.S. Environmental Protection Agency – Office of Research and Development
- Invited Panelist for Peer-Review of Development of National Aquatic Ecosystem Classifications and Reference Conditions – 2001 Science to Achieve Results (STAR) Program – U.S. Environmental Protection Agency
- Proposal Reviewer for National Science Foundation

- Volunteer Mentor for Students as Leaders in Engineering and the Women and Minorities in Engineering Program at Colorado State University
- Volunteer Project Mentor for Senior Design Groups in Civil Engineering
- Volunteer for the Colorado Alliance of Minority Participation
- Volunteer for the Native American Student Services Summer Youth Experience
- Volunteer Scientist for The Nature Conservancy and Eagle River Watershed Council
- Volunteer Scientist for the Wildland Restoration Volunteers, a non-profit organization that provides an opportunity for people to come together, learn about their natural environment, and take direct action to restore and care for the land (2012-present)
- Volunteer Scientist for the City of Fort Collins (with entire storm-water management team) to discuss long-term vision for stream restoration in the City (2012)
- Volunteer Scientist for the future of the “Poudre River – A Poudre Runs Through It” program (to professionals, politicians, and interested stakeholders) organized by the Water Center.
- Invited expert Panelist on the future of the Cache la Poudre River for the City of Fort Collins, CO, Draft Environmental Impact Statement (DEIS) for the Northern Integrated Supply Project (NISP) (2007-2008).

## **GRADUATE STUDENT ADVISING**

### **Committee Chair / Advisor:**

#### **Ph.D.**

Dan Baker (completed, GRA and Post-doc)  
Christopher Cuhaciyon (completed, GRA and Post-doc)  
David Dust (completed)  
Rod Lammers (in progress, I-WATER, NSF IGERT Program, GRA)  
Robert Hawley (completed, GRA)  
Jennifer Mueller Price (completed, GRA)  
David Raff (Post-doc)  
Joel Sholtes (in progress, I-WATER, NSF IGERT Program, GRA)  
Steven Yochum (completed, GRA)

#### **M.S.**

Stephen Adams (in progress, GRA)  
Russ Anderson (completed, GRA)  
Amer Battikhi (completed)  
Michael Brown (completed, GRA)  
Andrew Bryden (completed)  
Shaun Carney (completed, GRA)  
Erick Carlson (completed GDPE, GRA)  
Sarah Eberhart (completed, GRA)  
Andrea Fasen (completed)  
Alejandro Flores (completed, GRA)  
Brian Fox (completed, GRA)  
Brian Haines (in progress)  
James Hansen (in progress)  
Kyle Hardie (completed, GRA)  
Elaina Holburn (completed, GRA)  
Blair Hurst (completed, GRA)  
Nell Kolden (completed, GRA)  
Peter Kulchawik (completed, GRA)  
Rod Lammers (completed, GRA)

Brian McCaig (completed)  
Jonathan McIntosh (completed, GRA)  
John Meyer (completed, GRA)  
Sam Michels-Boyce (completed, GRA)  
Gabriel Miller (completed, GRA)  
Radley Ott (completed)  
Kevin Pilgrim (completed)  
David Pizzi (completed, GRA)  
Michael Rafferty (completed)  
Tyler Rosburg (completed, GRA)  
Erin Ryan (completed, GTA)  
Steve Sanborn (completed, GRA)  
Joshua Smalley (completed)  
Ben Snyder (completed)  
Tim Stephens (completed, GRA)  
Travis Stroth (in progress)  
Christy Wilson (completed)  
Dan Woolley (completed)

**Graduate Committee Service** – member of more than 160 M.S. and Ph.D. committees at Colorado State University since 2000.