

Curriculum Vitae—Derek B. Booth

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1. General Biographical Information

1.1. Basic data

Derek Blake Booth

Adjunct Professor, Bren School of Environmental Science & Management; and
Researcher IV, Earth Research Institute: University of California Santa Barbara

Senior Editor, *Quaternary Research* (Cambridge University Press)

Affiliate Professor, Departments of Earth & Space Sciences: University of Washington

Geologist and Geomorphologist, Stillwater Sciences, Inc.; Senior Geomorphologist, ESA,
Inc.

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publications)

1.2. Educational history

University of Washington, Seattle, Washington, Ph.D. in Geological Sciences, 1984:
“Glacier dynamics and the development of glacial landforms in the eastern Puget
Lowland, Washington”

Stanford University, Stanford, California, M.S. in Geology, 1980

University of California, Berkeley, California, B.A. in Geology, 1978

Hampshire College, Amherst, Massachusetts, B.A. in Literature, 1974

1.3. Employment history

Current:

Researcher IV, University of California Santa Barbara, Earth Research Institute (2021–
present).

Adjunct Professor, University of California Santa Barbara, Bren School of Environmental
Science & Management (2011–present).

Affiliate Professor, University of Washington, Department of Earth & Space Sciences, and
Interdisciplinary PhD Program in Urban Design and Planning (September 2006–
present).

Senior Editor, *Quaternary Research* (September 2005–present).

Senior Geologist and Geomorphologist (September 2006–present; President, June 2007–
February 2011), Stillwater Sciences, Inc.; Senior Geomorphologist, ESA, Inc. (2021–
present).

Historical:

Researcher III, University of California Santa Barbara, Earth Research Institute (2016–
2021).

Researcher II, Earth Research Institute, University of California Santa Barbara, (2012–2016),

Affiliate Professor, Department of Geosciences, Colorado State University (2015–2018).

Affiliate Professor, University of Washington, Department of Civil & Environmental Engineering (September 2006–2018).

Research Professor, University of Washington, with joint appointment in Department of Civil & Environmental Engineering and Department of Earth & Space Sciences (July 2005–August 2006); adjunct faculty appointments in Quaternary Research Center, College of Forest Resources, Department of Landscape Architecture, and Department of Urban Design and Planning.

Visiting Associate Professor, Department of Geology and Geophysics, Louisiana State University (2005).

Research Associate Professor, University of Washington, with joint appointment in Department of Civil & Environmental Engineering (1999–2005) and Department of Earth & Space Sciences (2003–2005).

Director, Center for Water and Watershed Studies, University of Washington (co-director 2002–2003; director 2003–2004).

Director, Center for Urban Water Resources Management, University of Washington, Department of Civil Engineering, 1995–2002 (reconstituted Sept. 2002 as Center for Water and Watershed Studies).

Research Assistant Professor, Department of Civil Engineering, 1995–1999.

Affiliate Assistant Professor, University of Washington, Department of Geological Sciences, 1984–1995; Department of Civil Engineering, 1992–1995; Department of Landscape Architecture, 1995.

Manager, King County, Seattle, Washington, Basin Planning Program, 1989–1990.

Geologist, King County, Seattle, Washington, Basin Planning Program, Surface Water Management Division, Department of Public Works, 1987–1996.

Geologist, King County, Seattle, Washington, Building and Land Development Division, Department of Parks, Planning, and Resources, 1985–1987.

Geologist, U.S. Geological Survey, Branch of Western Regional Geology, Menlo Park, California, 1979–1985.

1.4. Award and honors

Invited committee member, Salmon Science Advisory Group, Puget Sound Partnership, 2021–ongoing

Invited committee member, National Research Council, National Academies, 2007–2008

Outstanding Contribution to Washington’s Water Resources, American Water Resources Association, Washington State chapter, 2004

Merit Award for Environmental Planning, American Planning Association, for the Chico Creek Watershed Planning Project, 2003 (with Mindy Roberts)

Nominee, University of Washington Distinguished Graduate Mentor Award, 2000 and 2001

Fellow, Geological Society of America, 1999

University of Washington Graduate School Fellowship, 1983

Livingston Wernke Scholarship, 1981

National Science Foundation Graduate Fellowship, 1978–1981

2. Publications (ORCID 0000-0002-5242-4089)

2.1. Refereed archival journal publications (50 total)

- Bilby, R.E., Currens, K.P., Fresh, K.L., Booth, D.B., Fuerstenberg, R.R., and Lucchetti, G.L., 2023, Why aren't salmon responding to habitat restoration in the Pacific Northwest? *Fisheries*, v. 42(1), pp. 16–27.
- Downs, P.D., Booth, D.B., Fong, C.S., 2022, Process and perturbation in a high elevation alluvial system, Yosemite National Park, USA: *Geomorphology*, v. 419, doi 10.1016/j.geomorph.2022.108479.
- Scoggins, M., Booth, D.B., Fletcher, T., and 19 others, 2022, Community-powered urban stream restoration: A vision for sustainable and resilient urban ecosystems: *Freshwater Science*, v. 41(3), pp. 404–419.
- Booth, D.B., Ross-Smith, K., Haddon, E.K., Dunne, T., Larsen, E.W., Roche, J.W., Stock, G.M., and Mahacek, V., 2020, Opportunities and Challenges for Restoration of the Merced River through Yosemite Valley, Yosemite National Park, USA: *River Research and Application* 36(9), pp. 1803–1816.
- Booth, D.B., and Konrad, C.P., 2017, Hydrologic metrics for status-and-trends monitoring in urban and urbanizing watersheds: *Hydrological Processes*, 31(25), pp. 4507–4519.
- Cui, Y., Booth, D.B., J. Monschke, S. Gentzler, J. Roadifer, B. Greimann, and B. Cluer, 2016, Analyses of the erosion of fine sediment deposit for a large dam-removal project: an empirical approach: *International Journal of River Basin Management*, v. 15(1), pp. 103–114.
- Booth, D.B., Scholz, J.G., Beechie, T.J., and Ralph, S.C., 2016, Integrating limiting-factors analysis with process-based restoration to improve recovery of endangered salmonids in the Pacific Northwest, USA: *Water*, v. 8(5), 174; doi:10.3390/w8050174.
- Booth, D.B., Roy, A.H., Smith, B., and Kapps, K.A., 2016, Global perspectives on the Urban Stream Syndrome: *Freshwater Science*, v. 35(1), pp. 412–420.
- Walsh, C.J., Booth, D.B., Burns, M.J., Fletcher, T.D., Hale, R.L., Hoang, L.N., Livingston, G., Rippy, M.A., Roy, A.H., Scoggins, M., Wallace, A., 2016, Principles for urban stormwater management to protect stream ecosystems: *Freshwater Science*, v. 35(1), pp. 398–411.
- Utz, R.M., Hopkins, K.G., Beesley, L., Booth, D.B., Hawley, R.J., Baker, M.E., Freeman, M.C., Jones, K.L., 2016, Ecological resistance in urban streams: the role of natural and legacy attributes: *Freshwater Science*, v. 35(1), pp. 380–397.
- Booth, D.B., and Fischenich, C.J., 2015, A channel evolution model to guide sustainable urban stream restoration: *Area*, v. 47(4), pp. 408–421.
- Booth, D.B., Leverich, G., Downs, P.W., Dusterhoff, S., Araya, S., 2014, A method for spatially explicit representation of sub-watershed sediment yield, southern California, USA: *Environmental Management*, v. 53(5), pp. 968–984.
- Booth, D.B., Cui, Y., Diggory, Z., Pedersen, D., Kear, J., and Bowen, M., 2014, Determining appropriate instream flows for anadromous fish passage on an intermittent mainstem river, coastal southern California, USA: *Ecohydrology*, v. 7(2), pp. 745–759.

- Booth, D.B., Kraseski, K.A., and Jackson, C.R., 2014, Local and watershed-scale determinants of summertime urban stream temperatures: *Hydrological Processes*, v. 28(4), pp. 2427–2438.
- Bledsoe, B.P., Stein, E.D., Hawley, R.J., Booth, D., 2012, Framework and Tool for Rapid Assessment of Stream Susceptibility to Hydromodification: *Journal of the American Water Resources Association*, 48(4), pp. 788–808.
- Segura, C., and D.B. Booth, 2010, Effects of geomorphic setting and urbanization on wood, pools, sediment storage, and bank erosion in Puget Sound streams: *Journal of the American Water Resources Association*, v. 46(5), pp. 972–986.
- Rosenberg, E.A., P.W. Keys, D.B. Booth, D. Hartley, J. Burkey, A.C. Steinemann, and D.P. Lettenmaier, 2010, Precipitation extremes and the impacts of climate change on stormwater infrastructure in Washington State: *Climatic Change*, v. 102(1–2), pp. 319–349.
- Binder, L.C.W., Barcelos, J.K., Booth, D.B., Darzen, M., Elsner, M.M., Fenske, R., Graham, T.F., Hamlet, A.F., Hodges-Howell, J., Jackson, J.E., Karr, C., Keys, P.W., Littell, J.S., Mantua, N., Marlow, J., McKenzie, D., Robinson-Dorn, M., Rosenberg, E.A., Stöckle, C.O., Vano, J.A. 2010. Preparing for climate change in Washington State: *Climatic Change*, v. 102 (1-2), pp. 351–376.
- Downs, P.W., Y. Cui, J.K. Wooster, S.R. Dusterhoff, D.B. Booth, W.E. Dietrich, and L.S. Sklar, 2009, Managing reservoir sediment release in dam removal projects: an approach informed by physical and numerical modelling of non-cohesive sediment: *Journal of River Basin Management*, v. 7(3), pp. 1–20.
- Visitacion, B.J., D.B. Booth and A.C. Steinemann, 2009, Costs and Benefits of Stormwater Management: Case Study of the Puget Sound Region: *ASCE Journal of Urban Planning and Development*, v. 135 (4), pp. 150–158.
- Roberts, M.L., R.E. Bilby, and D.B. Booth, 2008, Hydraulic dispersion and reach-averaged velocity as indicators of enhanced organic matter transport in small Puget Lowland streams across an urban gradient: *Fundamental and Applied Limnology*, v. 171/2, pp. 145–159.
- Alberti, M., D.B. Booth, K. Hill, B. Coburn, C. Avolio, S. Coe, and D. Spirandelli. 2007. The impact of urban patterns on aquatic ecosystems: an empirical analysis in Puget lowland sub-basins: *Landscape and Urban Planning*, Vol. 80 (4), pp. 345–361.
- Booth, D.B., 2005, Challenges and prospects for restoring urban streams: *Journal of the North American Benthological Society*, v. 24, pp. 724–737.
- Konrad, C.P., D.B. Booth, and S.J. Burges, 2005, Effects of urban development in the Puget Lowland, Washington, on interannual streamflow patterns: Consequences for channel form and streambed disturbance: *Water Resources Research*, v. 41 (7), pp. 1–15.
- McBride M., and D.B. Booth, 2005, Urban impacts on physical stream conditions: effects of spatial scale, connectivity, and longitudinal trends: *Journal of the American Water Resources Association*, v. 41 (3), pp. 565–580.

- Booth, D.B., J.R. Karr, S. Schauman, C.P. Konrad, S.A. Morley, M.G. Larson, and S.J. Burges, 2004, Reviving urban streams: land use, hydrology, biology, and human behavior: *Journal of the American Water Resources Association*, v. 40(5), pp. 1351–1364.
- Booth, D.B., K.G. Troost, and J.T. Hagstrum, 2004, Deformation of Quaternary strata and its relationship to crustal folds and faults, central Puget Lowland, Washington: *Geology*, v. 32, pp. 505–508.
- Booth, D.B., R.E. Wells, and R. Givler, 2004, Chimney damage in the greater Seattle area from the Nisqually earthquake of February 28, 2001: *Bulletin of the Seismological Society of America*, v. 94(3), pp. 1143–1158.
- Booth, D.B., and B.O. Brattebo, 2004, Permeable pavement update: *Journal of the American Planning Association* (research note), v. 70(1), p. 98.
- Brattebo, B.O., and D.B. Booth, 2003, Long-Term Stormwater Quantity and Quality Performance of Permeable Pavement Systems: *Water Research*, v. 37, pp. 4369–4376.
- Hagstrum, J.T., D.B. Booth, K.G. Troost, and R.J. Blakely, 2002, Magnetostratigraphy, paleomagnetic correlation, and deformation of Pleistocene deposits in the south-central Puget Lowland, Washington: *Journal of Geophysical Research–Solid Earth*, v. 107(B4): art. no. 2079 Apr 10 2002.
- Konrad, C.P., D.B. Booth, S.J. Burges, and D.R. Montgomery, 2002, Partial entrainment of gravel bars during floods: *Water Resources Research*, v. 38 (7), 10.1029, pp. 9-1 – 9-16.
- Booth, D.B., D. Hartley, and C.R. Jackson, 2002, Forest cover, impervious-surface area, and the mitigation of stormwater impacts: *Journal of the American Water Resources Association*, v. 38, pp. 835–845.
- Nelson, E.J., and D.B. Booth, 2002, Sediment budget of a mixed-land use, urbanizing watershed: *Journal of Hydrology*, v. 264, pp. 51–68.
- Larson, M.L., D.B. Booth, and S.M. Morley, 2001, Effectiveness of large woody debris in stream rehabilitation projects in urban basins: *Ecological Engineering*, v. 18(2), pp. 211–226.
- Scholz, J.G., and D.B. Booth, 2001, Monitoring small urban streams: Strategies and protocols for humid-region lowland systems: *Environmental Monitoring and Assessment*, v. 71(2), pp. 143–164.
- Mazer, G., D.B. Booth, and K. Ewing, 2001, Factors contributing to vegetation growth in biofiltration swales: *Ecological Engineering*, v. 17(4), pp. 429–443.
- Henshaw, P.C., and D.B. Booth, 2000, Natural restabilization of stream channels in urban watersheds: *Journal of the American Water Resources Association*, v. 36(6), pp. 1219–1236.
- Comings, K.J., D.B. Booth, and R.R. Horner, 2000, Pollutant Removals by Two Wet Ponds in Bellevue, Washington: *ASCE Journal of Environmental Engineering*, v. 126(4), pp. 321–330.
- Booth, D.B., and J. Leavitt, 1999, Field evaluation of permeable pavement systems for improved stormwater management: *Journal of the American Planning Association*, v. 65(3), pp. 314–325.

- Booth, D.B., and C.R. Jackson, 1997, Urbanization of aquatic systems—degradation thresholds, stormwater detention, and limits of mitigation: *Journal of American Water Resources Association*: v. 33(5), pp. 1077–1090.
- Booth, D.B., 1994, Glaciofluvial infilling and scour of the Puget Lowland, Washington, during ice-sheet glaciation: *Geology*, v. 22, pp. 695–698.
- Booth, D.B., and B. Hallet, 1993, Channel networks carved by subglacial water: Observations and reconstruction in the eastern Puget Lowland of Washington: *Geological Society of America Bulletin*, v. 105, pp. 671–683.
- Booth, D.B., 1991, Glacier physics of the Puget lobe, southwest Cordilleran ice sheet: *Geographie Physique et Quaternaire*, v. 45, pp. 301–316.
- Booth, D.B., 1991, Urbanization and the Natural Drainage System—Impacts, Solutions, and Prognoses: *Northwest Environmental Journal*, v. 7, pp. 93–118.
- Booth, D.B., 1990, Stream-channel incision following drainage-basin urbanization: *Water Resources Bulletin*, v. 26, pp. 407–417.
- Brown, N.E., B. Hallet, and D.B. Booth, 1987, Rapid soft-bed sliding of the Puget glacial lobe: *Journal of Geophysical Research*, v. 92 (B9), pp. 8985–8998.
- Booth, D.B., 1986, Mass balance and sliding velocity of the Puget lobe of the Cordilleran ice sheet during the last glaciation: *Quaternary Research*, v. 25, pp. 269–280.
- Booth, D.B., 1986, The formation of ice-marginal embankments into ice-dammed lakes in the eastern Puget Lowland, Washington, U.S.A., during the late Pleistocene: *Boreas*, v. 15, pp. 247–263.
- Booth, D.B., 1981, Macroscopic behavior of freezing saturated silty soils: *Cold Regions Science and Technology*, v. 4, pp. 163–174.

2.2. Fully refereed conference proceedings and other non-journal refereed publications (10 total)

- Booth, D.B., Dusterhoff, S.R., Stein, E.D., and Bledsoe, B.P., 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, Costa Mesa, CA. (<http://www.sccwrp.org/researchareas/RelatedPublications.aspx?id=ea6e7471-fa97-4ff9-8dd8-9bb0ab052096>).
- Whitely Binder, L.C., Barcelos, J.K., Booth, D.B., and 17 others, 2009, Washington Climate Change Impacts Assessment: Evaluating Washington's Future in a Changing Climate—Washington State Department of Ecology, Olympia, WA (<http://cses.washington.edu/cig/res/ia/waccia.shtml#report>).
- Booth, D.B., K.G. Troost, Scott A. Shimel, Michael A. O'Neal, and A.P. Wisher, 2006, New geologic mapping and geologic database for the urbanized Puget Lowland, western Washington State, USA: in D.R. Soller, ed., *Digital Mapping Techniques '05 -- Workshop Proceedings*: U.S. Geological Survey Open-file Report 2005-1428, pp. 259–266.

Booth, D.B., C.P. Konrad, S.A. Morley, M.G. Larson, J.R. Karr, Sally Schauman, S.J. Burges, and Mindy Roberts, 2003, Strategies and limitations for urban watershed planning: EPA/625/R-03/003, National Conference on Urban Storm Water, Chicago, IL, February 17–20, 2003.

Konrad, C.P., and Booth, D.B., 2002, Hydrologic trends resulting from urban development in western Washington streams: U.S. Geological Survey Water-Resources Investigation Report, 02-4040, 40 pp.

Kay, J., R.N. Handcock, A. Gillespie, C. Konrad, S. Burges, N. Naveh, and D.B. Booth, 2001, Stream-temperature estimation from thermal infrared images: International Geoscience and remote Sensing Symposium, 9–13 July, 2001, Sydney, Australia.

Packman, J.J., K.J. Comings, and D.B. Booth, 1999, Using turbidity to determine total suspended solids in urbanizing streams in the Puget Lowlands: *in* Confronting Uncertainty: Managing Change in Water Resources and the Environment, Canadian Water Resources Association annual meeting, Vancouver, BC, 27–29 October 1999, pp. 158–165.

Booth, D.B., D.R. Montgomery, and J.P. Bethel, 1997, Large woody debris in urban streams of the Pacific Northwest: *in* Roesner, L.A., ed., Effects of watershed development and management on aquatic ecosystems: Engineering Foundation Conference, Proceedings, Snowbird, Utah, August 4–9, 1996 (invited).

Horner, R.R., D.B. Booth, A. Azous, and C.W. May, 1997, Watershed determinants of ecosystem functioning: *in* Roesner, L.A., ed., Effects of watershed development and management on aquatic ecosystems: Engineering Foundation Conference, Proceedings, Snowbird, Utah, August 4–9, 1996 (invited).

Booth, D.B., and C.R. Jackson, 1994, Urbanization of aquatic systems—thresholds and the limits of mitigation: American Water Resources Association, Summer Symposium on "Effects of Human-Induced Changes in Hydrologic Systems," Jackson Hole, Wyoming, pp. 425–434.

Booth, D.B., 1988, Land-use planning in the mitigation of seismic hazards: *in* "Workshop on Evaluation of Earthquake Hazards and Risk in the Puget Sound and Portland Areas", U.S. Geological Survey Open-File Report 88–541, pp. 199–204.

2.3. Published geologic maps (all peer reviewed) (28 total)

Booth, D.B., K.G. Troost, and R.W. Tabor, 2015, Geologic Map of the Vashon 7.5' Quadrangle and Selected Areas, King County, Washington: U.S. Geological Survey Scientific Investigation Map 3328, scale 1:24,000 (<http://pubs.usgs.gov/sim/3328/>).

Tabor, R.W., D.B. Booth, and K.G. Troost, 2014, Lidar–Revised Geologic Map of the Poverty Bay 7.5' Quadrangle, King and Pierce Counties, Washington: U.S. Geological Survey Scientific Investigations Map SIM 3317, scale 1:24,000 (<http://pubs.usgs.gov/sim/3317/>).

Tabor, R.W., R.A. Haugerud, D.B. Booth, and K.G. Troost, 2014, Lidar–Revised Geologic Map of the Olalla 7.5' Quadrangle, King, Kitsap, and Pierce Counties, Washington: U.S. Geological Survey Scientific Investigations Map SIM 3277, scale 1:24,000 (<http://pubs.usgs.gov/sim/3277/>).

- Booth, D.B., T.J. Walsh, K.G. Troost, and S.A. Shimel, 2012, Geologic map of the Issaquah quadrangle: U.S. Geological Survey Scientific Investigation Map SIM 3211, scale 1:24,000 (<http://pubs.usgs.gov/sim/3211/>).
- Booth, D.B., K.G. Troost, and S.A. Shimel, 2009, Geologic map of the Seattle NE quadrangle: U.S. Geological Survey Scientific Investigation Map 3065, scale 1:12,000 (<http://pubs.usgs.gov/sim/3065/>).
- Booth, D.B., K.G. Troost and, S.A. Shimel, 2005, Geologic map of northwestern Seattle (part of the Seattle North 7.5' x 15' quadrangle), King County, Washington: U.S. Geological Survey Scientific Investigations Map 2903, 1:12,000 (<http://pubs.usgs.gov/sim/2005/2903/>).
- Booth, D.B., and K.G. Troost, 2005, Geologic map of the Olalla 7.5-minute quadrangle, Washington: U.S. Geological Survey Scientific Investigations Map 2902, scale 1:24,000 (<http://pubs.usgs.gov/sim/2005/2902/>).
- Troost, K.G., Booth, D.B., Wisher, A.P., and Shimel, S.A., 2005, The geologic map of Seattle: U.S. Geological Survey Open-File Report 2005-1252, scale 1:24,000 (<http://pubs.usgs.gov/of/2005/1252/>).
- Booth, D.B., and H.H. Waldron, 2004, Geologic map of the Des Moines 7.5-minute quadrangle, Washington: U.S. Geological Survey Scientific Investigation Map SIM-2855, scale 1:24,000 (<http://pubs.usgs.gov/sim/2004/2855/>).
- Booth, D.B., H.H. Waldron, and K.G. Troost, 2004, Geologic map of the Poverty Bay 7.5-minute quadrangle, Washington: U.S. Geological Survey Scientific Investigation Map SIM-2854, scale 1:24,000 (<http://pubs.usgs.gov/sim/2004/2854/>).
- Tabor, R.W., D.B. Booth, J.A. Vance, and A.B. Ford, 2002, Geologic map of the Sauk River 1:100,000 quadrangle, Washington: U.S. Geological Survey Miscellaneous Investigations Map I-2592, 2 sheets with pamphlet (<http://pubs.usgs.gov/imap/i2592/>).
- Tabor, R.W., V.A. Frizzell, Jr., D.B. Booth, and R.B. Waitt, Jr., 2000, Geologic map of the Snoqualmie Pass 30-minute by 60-minute quadrangle, Washington: U.S. Geological Survey Miscellaneous Investigations Map I-2538, scale 1:100,000, 57 pp.
- Booth, D.B., 1995, Geologic map of the Maple Valley quadrangle, King County, Washington: U.S. Geological Survey Miscellaneous Field Studies Map MF-2297, scale 1:24,000.
- Tabor, R.W., R.A. Haugerud, D.B. Booth, and E.H. Brown, 1994, Preliminary geologic map of the Mount Baker 30-minute by 60-minute quadrangle, Washington: U.S. Geological Survey Open-File Report 94-403, scale 1:100,000.
- Tabor, R.W., V.A. Frizzell, Jr., D.B. Booth, R.B. Waitt, Jr., J.T. Whetten, and R.E. Zartman, 1993, Geologic map of the Skykomish River 30- by 60-minute quadrangle, Washington: U.S. Geological Survey Miscellaneous Investigations Map I-1963, scale 1:100,000.
- Booth, D.B., and J.P. Minard, 1992, Geologic map of the Issaquah quadrangle, King County, Washington: U.S. Geological Survey Miscellaneous Field Studies Map MF-2206, scale 1:24,000.

- Booth, D.B., 1991, Geologic map of Vashon and Maury Islands, King County, Washington: U.S. Geological Survey Miscellaneous Field Investigations Map MF-2161, scale 1:24,000, 6 pp.
- Booth, D.B., 1990, Surficial geology of the Skykomish and Snoqualmie Rivers area, Snohomish and King Counties, Washington: U.S. Geological Survey Miscellaneous Investigations Map I-1745, scale 1:50,000, 2 sheets with pamphlet.
- Booth, D.B., 1989, Surficial geology of the Granite Falls 15' quadrangle, Snohomish County, Washington: U.S. Geological Survey Miscellaneous Investigations Map I-1852, scale 1:50,000.
- Pessl, F., Jr., D.P. Dethier, D.B. Booth, and J.P. Minard, 1989, Surficial geology of the Port Townsend 1:100,000 quadrangle, Washington: U.S. Geological Survey Miscellaneous Investigations Map I-1198F, 2 sheets with pamphlet.
- Minard, J.P., and D.B. Booth, 1988, Geologic map of the Redmond quadrangle, King and Snohomish Counties, Washington: U.S. Geological Survey Miscellaneous Field Investigations Map MF-2016, scale 1:24,000.
- Tabor, R.W., V.A. Frizzell, Jr., J.T. Whetten, D.A. Swanson, G.R. Byerly, D.B. Booth and others, 1980, Preliminary geologic map of the Chelan 1:100,000 quadrangle, Washington: U.S. Geological Survey Open-File Report 80-841.

2.4. Books and editing

Chapters and co-authorship of edited books (19 total)

- Booth, D.B., 2021, Urban Waterways: Chapter 58 *in* Douglas, I., D. Goode, M. Houck, and R. Wang, eds., *The Routledge Encyclopedia of Urban Ecology*, 2nd Edition, pp. 749–761.
- Booth, D.B., 2019, Watersheds: Chapter 8 *in* Quinn, T., Wilhere, G., and Krueger, K., eds., *Riparian Ecosystems, Volume 1: Science synthesis and management implications*: Washington Department of Fish and Wildlife, Olympia, WA, pp. 237–264. Available at <https://wdfw.wa.gov/sites/default/files/publications/01987/wdfw01987.pdf>
- Downs P.W., and D.B. Booth, 2011, Geomorphology in environmental management: *in* Gregory, K.J. and Goudie, A.S., eds., *The SAGE Handbook of Geomorphology*, SAGE Publications, London, pp.78–104.
- Booth, D.B., and B. Bledsoe, 2009, Streams and urbanization: Chapter 6 *in* L.A. Baker, ed., *The Water Environment of Cities*: New York, Springer, 375 pp.
- Committee on Reducing Stormwater Discharge Contributions to Water Pollution, 2009, *Urban Stormwater Management in the United States*: National Academies Press, Washington, DC, 598 pp.
- Troost, K.G., and D.B. Booth, 2008, Geology of Seattle and the Seattle area, Washington: Chapter 1 *in* Baum, R.L., Godt, J.W., and Highland, L.M., eds., *Landslides and Engineering Geology in the Seattle, Washington, Area*: Geological Society of America Reviews in Engineering Geology, v. XX, pp. 1–36.
- Booth, D.B., 2008, “Stormwater Management”: Chapter 284 *in* Trimble, S.W., ed., *Encyclopedia of Water Science*, Second Edition: New York, CRC Press, pp. 1163–1166.

Hinman C.H., and D.B. Booth, 2008, "Low-Impact Development": Chapter 174 in Trimble, S.W., ed., *Encyclopedia of Water Science*, Second Edition: New York, CRC Press, pp. 734–737.

Konrad, C.P., and D.B. Booth, 2005, Ecological significance of hydrologic changes in urban streams: chapter in L.R. Brown, R.H. Gray, R.M. Hughes, and M.R. Meador, editors. *Effects of Urbanization on Stream Ecosystems*. American Fisheries Society, Symposium 47, pp. 157–177.

Booth, D.B., Troost, K.G., Clague, J.J., and Waitt, R.B., 2004, The Cordilleran ice sheet: Chapter 2 in Gillespie, A., Porter, S.C., and Atwater, B., eds., *The Quaternary Period in the United States: International Union for Quaternary Research*, Elsevier Press, pp. 17–43.

Chapters in: D.R. Montgomery, S. Bolton, D.B. Booth, and L. Wall, eds., 2003, *Restoration of Puget Sound Rivers*: University of Washington Press, 505 pp.

D.R. Montgomery, D.B. Booth, and S. Bolton, *Puget Sound rivers and salmon recovery*, pp. 1–13.

D.B. Booth, R.A. Haugerud, and K.G. Troost, *Geology, watersheds, and Puget Lowland rivers*, pp. 14–45.

J.M. Buffington, R.D. Woodsmith, D.B. Booth, and D.R. Montgomery, *Fluvial processes in Puget Sound rivers in the Pacific Northwest*, pp. 46–78.

S. Bolton, D.B. Booth, and D.R. Montgomery, *Restoration of Puget Sound rivers: Do we know how to do it?*, pp. 483–490.

Booth, D.B., and P.C. Henshaw, 2001, Rates of channel erosion in small urban streams: chapter in M. Wigmosta and S. Burges, eds., *Land Use and Watersheds: Human Influence on Hydrology and Geomorphology in Urban and Forest Areas*: AGU Monograph Series, Water Science and Application Volume 2, pp. 17–38.

Booth, D.B., and J.P. Bethel, 1998, Approaches for seismic hazard mitigation by local governments—an example from King County, Washington: chapter in Rogers, A.M., Walsh, T.J., Kockelman, W.J., and Priest, G.R., *Assessing and Reducing Earthquake Hazards in the Pacific Northwest*: U.S. Geological Survey Professional Paper 1560, v. 2, pp. 537–542.

Booth, D.B., 1998, Implementation of stream restoration projects: section in *Federal Interagency Stream Corridor Restoration Handbook*: Washington, DC, Interagency Production Team (USCOE, USBLM, USEPA, USFWS, USDA) (http://www.nrcs.usda.gov/technical/stream_restoration/newgra.html).

Booth, D.B., 1989, Runoff and stream-channel changes following urbanization in King County, Washington: chapter in Gallster, R., ed., *Engineering Geology in Washington*, Vol. II: Washington Division of Geology and Earth Resources Bulletin 78, pp. 639–650.

Booth, D.B., 1987, Timing and processes of deglaciation along the southern margin of the Cordilleran ice sheet: chapter in Ruddiman, W.F., and Wright, H.E. Jr., eds., *North America and adjacent oceans during the last deglaciation*: Boulder, Colorado, Geological Society of America, *The Geology of North America*, v. K-3, pp. 71–90.

Books edited

Montgomery, D., S. Bolton, D.B. Booth, and L. Wall, eds., 2003, Restoration of Puget Sound Rivers: University of Washington Press, 505 pp.

Journals edited

Senior Editor, *Quaternary Research* (Cambridge University Press) (2005–present)
Editorial Board, *Quaternary Science Reviews* (Elsevier Science Press) (2015–2016)
Editorial Board, *Watershed Science Bulletin* (Center for Watershed Protection) (2010–2022)

2.5. Miscellaneous conference abstracts and non-refereed proceedings (101 total; 2008–present shown)

Haddon, E.K, Stock, G.M., Booth, D.B., Gray, H.J., and Mahan, S.A., 2021, The pace of deglaciation and postglacial landscape response in Yosemite Valley, California: Geological Society of America Abstracts with Programs, Vol. 53, No. 4, doi: 10.1130/abs/2021CD-363144.

Booth, D.B., 2018, Faith-based restoration and the conundrum of “restoring” urban watersheds: Abstract H14E-01, presented at 2018 Fall Meeting, AGU, Washington, DC, 10–14 Dec.

Haddon, E., Stock, G., and Booth, D.B., 2017, Latest Pleistocene and Holocene landscape evolution of Yosemite Valley, California: Geological Society of America, Abstracts with Programs, Annual Meeting, v. 49.

Troost, K.G., and Booth, D.B., 2017, MIS 4 and older Pleistocene deposits in the Puget Lowland, Washington state: Geological Society of America, Abstracts with Programs, Annual Meeting, v. 49.

Haddon, E., Stock, G., and Booth, D.B., 2016, Latest Pleistocene and Holocene surficial deposits and landforms of Yosemite Valley, California: Eos Trans. AGU, 97, Fall Meet. Suppl. Abstract, EP13B-1030.

Booth, D.B., Scholz, J., and Beechie, T, 2015, Broadening the view of “limiting factors” vs “process-based” restoration strategies to maximize systematic endangered species planning and recovery in the West: Proceedings of the Salmon Restoration Federation Annual Conference, Santa Rosa, CA, March 11–14, 201, p. 130.

Booth, D.B. and Fischenich, C.J., 2014, Regional context and local-scale controls on the evolution of urban streams: 3rd Symposium on Urbanization and Stream Ecology, Portland, OR, May 15–17, 2014, p. 15.

Booth, D.B., 2014, Urban streams of the Pacific Northwest: 3rd Symposium on Urbanization and Stream Ecology, Portland, OR, May 15–17, 2014, p. 60.

Booth, D.B., Cui, Y., Diggory, Z., Pedersen, D., Kear, J., and Bowen, M., 2014, Instream flows for anadromous fish passage on the intermittent and partly regulated Santa Maria River, coastal Southern California (invited): Proceedings of the Salmon Restoration Federation Annual Conference, Santa Barbara, CA, March 22, 2014, p. 81.

Bell, Ethan, Araya, Sebastian, and Booth, D.B., 2014, regional assessment of instream flow needs for steelhead in San Luis Obispo County: Proceedings of the Salmon Restoration Federation Annual Conference, Santa Barbara, CA, March 22, 2014, p. 82.

- Booth, Derek B., Kraseski, Kristin A., Bahn, Robert A., and Jackson, C. Rhett, 2012, Effects of surficial geology, lakes, and land use on urban stream temperatures, metropolitan Seattle: Geological Society of America, Abstracts with Programs, Annual Meeting, v. 44.
- Warrick, J.A., Romans, B.W., Leverich, G.T., and Booth, D.B., 2011, Source-to-sink in the western Transverse Ranges: field trip guide for the AGU Chapman Conference on Source to Sink Systems Around the World and Through Time, Oxnard, CA, January 24–27, 2011.
- Booth, D.B., 2010, The National Research Council's review of stormwater permitting—is there a regulatory path to healthy urban streams? (invited): 2010 Oregon Chapter Annual Meeting, American Fisheries Society, Eugene, OR.
- Booth, D.B., and Ralph, S.C., 2010, Management, monitoring, and restoring urban streams(invited): River Restoration Northwest, 9th Annual symposium, Skamania, WA.
- Booth, D.B., 2009, Urban steams: A challenge for society (invited): Second Conference on Ecological Landscaping, Urban Landscape Ecology Program, The Ohio State University, Cleveland, OH.
- Booth, D.B., 2009, Urbanization, stream-channel change, and hydromodification (invited): Sustainable Stormwater Symposium, ASCE and APWA, Portland, Oregon.
- Booth, D.B., and Ralph, S.C., 2009, Management, monitoring, and restoring urban streams: 3rd National Conference on Ecosystem Restoration, Los Angeles, CA.
- Amerson, B., Stallman, J., and Booth, D.B., 2009, Unconventional wisdom and the effects of dams on downstream coarse sediment supply: River Restoration Northwest, 8th Annual symposium, Skamania, WA.
- Keys, P.W., Rosenberg, E.A., Booth, D.B., Steinemann, A.C., and Lettenmaier, D.P., 2008, Precipitation extremes and the impacts of climate change on stormwater in Washington State: Eos Trans. AGU, 89, Fall Meet. Suppl. Abstract.
- Booth, D.B., Bledsoe, B., and Stein, E., 2008, Four decades of research into stream-channel changes in urban environments, and their implications for southern California: H₂O Conference, Long Beach, CA.
- Booth, D.B., Downs, P.W., Dusterhoff, S.R., and Leverich, G.T., 2008, Comparative rates of uplift and fluvial erosion in the Santa Paula and Sespe watersheds (western Transverse Ranges), CA: Geological Society of America, Abstracts with Programs, Annual Meeting, v. 40.

3. Other Scholarly Activities

3.1. Invited lectures and seminars (86 total; 2008–present shown)

Upper Columbia Science Conference, 2024 meeting, *Lessons learned from decadal-scale evaluations of river restoration projects*, Wentachee, WA, January 25, 2024.

Sustaining Colorado Watersheds Conference, 2022 annual meeting, *Lessons across research and design: Decadal-scale evaluations of river restoration projects*, Avon, CO, October 11, 2022.

American Geophysical Union, Annual Meeting, *Faith-based restoration and the conundrum of “restoring” urban watersheds*, Washington, DC, December 10, 2018.

Thinking Outside of the Reach, River Science and Management Workshop, *Managing the urban impacts on rivers in Mediterranean climates*, Santa Paula, CA, July 13, 2017.

CUASHI (Consortium of Universities for the Advancement of Hydrologic Science), 2014 Fall Cyberseminar Series on Sustainable Urban Streams, *Watershed context and the evolution of urban streams*, national webinar, November 7, 2014.

3rd Symposium on Urbanization and Stream Ecology, *Context and the evolution of urban streams*, Portland, OR, May 15, 2014.

Salmon Restoration Federation, Annual Conference, *Instream flows for anadromous fish passage on the intermittent and partly regulated Santa Maria River, coastal Southern California*, Santa Barbara, CA, March 22, 2014.

School of the Environment, Nanjing University, *Stresses, responses, and rehabilitation of urban streams*, Nanjing, China, March 18, 2014.

Bay Area Watershed Network, Watershed Assessment Workshop, *Assessments to guide river restoration project design*, Oakland, CA, May 20, 2013.

MEDECOS (Mediterranean Ecosystem Society), XII International Conference, *Effects of watershed urbanization on Mediterranean-type streams*, Los Angeles, CA, September 8, 2011.

University of Washington Annual Water Symposium, keynote speaker, *Treating the symptoms or curing the disease?* Seattle, WA, April 18, 2011.

City of Portland Environmental Lecture Series, *Stormwater management in the 21st century*, Portland, OR, March 14, 2011.

Association of Groundwater Agencies, American Groundwater Trust, Annual conference on Water Resources Issues in Southern California: *River restoration, groundwater use, and surface flow: a case study of the Santa Maria River*, February 7, 2011, Ontario, CA.

University of California Berkeley, California Department of Fish and Game, and Southern California Coastal Water Research Project: *Episodic river channel form*, Costa Mesa, CA, November 8, 2010.

Oregon Chapter Annual Meeting, American Fisheries Society: *The National Research Council's review of stormwater permitting—is there a regulatory path to healthy urban streams?*, Eugene, OR, February 25, 2010; and Portland, OR, October 14, 2010.

River Restoration Northwest, 9th Annual symposium: *Management, monitoring, and restoring urban streams*, Skamania, WA, February 3, 2010.

Second Conference on Ecological Landscaping, Urban Landscape Ecology Program, The Ohio State University: *Urban streams: A challenge for society*, Cleveland, Ohio, December 1, 2009.

California Stormwater Quality Association, Fifth Annual Stormwater Conference: *Hydromodification, monitoring, and adaptive management*, San Diego, CA, November 4, 2009.

American Society of Civil Engineers and the American Public Works Association, Oregon Chapters, Sustainable Stormwater Symposium, opening keynote address: *Urbanization, stream-channel change, and hydromodification*, Portland, Oregon, September 16, 2009.

Law Seminars International, Clean Water and Stormwater Conference: *Stormwater management—lessons from around the US*, Seattle, April 6, 2009.

University of Delaware, Department of Geography, noontime colloquium: *A tale of three rivers*, February 9, 2009.

Urban Ecosystem Research Consortium, annual symposium, opening keynote address: *Management, monitoring, and the ecological integrity of urban streams*, Portland State University, January 26, 2009.

US Environmental Protection Agency, Region X, Climate Change and Water Infrastructure Forum: *Climate change impacts on water infrastructure—Washington State*, Seattle, September 4, 2008.

Floodplain Management Association Annual Meeting: *Floodplain Management Strategies for the Santa Clara River, Ventura County, California*, San Diego, CA, September 3, 2008.

Southern California Wetlands Recovery Symposium: *Patterns, rates, and consequences of sediment delivery into Santa Paula Creek, California*, San Diego, May 7, 2008.

University of Washington, Water Center Annual Review: *West coast watersheds and the streams they create*, Seattle, February 14, 2008.

3.2. Other presentations given at conferences (47 total; 2008–present shown)

River Restoration Northwest, Annual Meeting, *Lessons across research and design: Decadal-scale evaluations of river restoration projects*, Skamania, WA, February 8, 2023.

Geological Society of America, Annual Meeting, *Integrating restoration approaches to improve recovery of endangered salmonids in the Pacific Northwest, USA*, Denver, CO, September 26, 2016.

Salmon Restoration Federation, Annual Conference, *Broadening the view of “limiting factors” vs “process-based” restoration strategies*, Santa Rosa, CA, March 14, 2015.

H₂O Conference (Headwaters to Ocean), Annual meeting, *Developing an effective regional watershed planning tool for MS4 infiltration and hydromodification compliance*, San Diego, CA, May 30, 2012.

3rd National Conference on Ecosystem Restoration, *Management, monitoring, and restoring urban streams*, Los Angeles, CA, July 15, 2009.

Washington State Climate Change Symposium, *Summary of effects of climate change on urban stormwater infrastructure*, Seattle Convention Center, February 12, 2009.

H₂O Conference (Headwaters to Ocean), Annual meeting, *Four decades of research into stream-channel changes in urban environments, and their implications for southern California*: Long Beach, CA, October 29, 2008.

Geological Society of America, Annual Meeting, *Ripple: a digital-terrain based model for linking fish to channel networks*, Houston, TX, October 8, 2008.

Geological Society of America, Annual Meeting, *Comparative rates of uplift and fluvial erosion in the Santa Paula and Sespe watersheds (western Transverse Ranges)*, CA, Houston, TX, October 5, 2008.

Floodplain Management Association Annual Meeting: *Floodplain Management Strategies for the Santa Clara River, Ventura County, California*, San Diego, California, September 3, 2008 (invited).

3.3. Professional society memberships

American Geophysical Union, 1985–present

Geological Society of America, 1984–present (elected Fellow 1999)

Northwest Geological Society, 1987–2007 (President 1989)

3.4. Professional licenses

Professional Geologist: September 28, 2001 (State of Washington, License #195); June 22, 2007 (State of California, License #8402)

Professional Engineer—Civil: July 24, 2000 (State of Washington, License #36876); March 6, 2023 (Colorado, License #62269)

3.5. Other Reviews Made—journals (>300 articles not as editor)

Annals of the American Association of Geographers

Anthropocene

Aquatic Sciences

ASCE Journal of Construction Engineering and Management

ASCE Journal of Water Resources Planning and Management

Climate Risk Management

Earth Surface Processes and Landforms

Ecohydrology & Hydrobiology

Ecological Applications

Ecological Indicators

Ecological Restoration

Encyclopedia of Water

Environment, Development and Sustainability
Environmental Management
Environmental Management and Assessment
Environmental Monitoring and Assessment
Environmental Processes
Environmental Science and Pollution Research
Environments
Freshwater Science
Geofluids
Geological Society of American Books
Geological Society of American Bulletin
Geology (published by the Geological Society of America)
Geomorphology
Hydrobiologia
Hydrological Processes
Hydrological Sciences Journal
Infrastructures
Journal of Building Engineering
Journal of Ecological Engineering Design
Journal of Environmental Engineering
Journal of Environmental Management
Journal of Glaciology
Journal of Hydrologic Engineering
Journal of Hydrology
Journal of the American Water Resources Association
Journal of the North American Benthological Society
Journal of Sustainable Water in the Built Environment
Knowledge and Management of Aquatic Ecosystems
Land Degradation and Development
Land Use Policy
Landscape and Urban Planning
Landscape Ecology
Marine and Freshwater Research
North American Journal of Fisheries Management
PLOS ONE
Proceedings of the National Academy of Science
Quaternary Science Reviews
Restoration Ecology
River Research and Applications
Science of the Total Environment
Scientific Reports
Sustainability
Urban Ecosystems
Urban Sustainability Urban Water Journal
Water
Water Practice
Water Research
Water Resources Research

3.6. Reviews Made—other

Gulf Coast Ecosystem Restoration Council, 2023

French National Research Agency (ANR), 2021
Delta Science Awards, 2021
Mictas Canada, Accelerate program, 2019
California Sea Grant Program, 2018
US Fish and Wildlife Service, ESA 4(d) proposed rule, 2015.
Washington State Governor's Salmon Office, review of the Salmon Recovery Funding Board's monitoring program, 2013.
Independent Multidisciplinary Science Team for the State of Oregon, review of report on the effects of urban and rural-residential land use on wild salmonids, 2009
U.S. General Accounting Office, Evaluation of National Water-Quality Policy, Delphi review panelist, 2001.
U.S. Geological Survey, National Educational Mapping Program, Panel member 1997–2000.
U.S. Geological Survey, National Earthquake Hazard Reduction Program, Panel member 1992, 1993, 1996.
U.S. Geological Survey, multiple (>20) map and manuscript reviews.
Olympic National Research Center, proposal reviews, 2004.
Review of "Beach Processes and Sedimentation" by Paul Komar: Journal of the American Water Resources Association, v. 34(3), pp. 697–698, 1998.
Review of "Glacial Geologic Processes" by David Drewry: Quaternary Research, v. 28, p. 175, 1987.

Other mail reviews:

Delta Science Program
American Association for the Advancement of Science, Research Competitiveness Program.
CALFED Bay-Delta grant program.
Gulf Coast Ecosystem Restoration Council (RESTORE Council)
National Research Council, Watershed Management for Potable Water Supply: Assessing the New York City Strategy, National Academy Press, 2000.
National Science and Engineering Research Council (Canada).
National Science Foundation, Programs in Geosciences, Polar Research, Ecosystem Studies, Geomorphology and Land Use Dynamics, and Engineering.
National Science Foundation–US Environmental Protection Agency "Waters and Watersheds" program.
Natural Environment Research Council (UK).
Netherlands Organization for Scientific Research.
Swiss National Science Foundation.

4. Graduate Students

4.1. Chaired doctoral degrees (4 total)

Student	Dissertation Title	Current Employer	Year Completed
Kathy Troost	Chronology, Lithology and Paleoenvironmental Interpretations of the Penultimate Ice-Sheet Advance into the Puget Lowland, Washington State	Univ. of WA	2016
Mindy Roberts	Sources, Transport and Fate of Terrestrial Organic Matter Inputs to Small Puget Lowland Streams: Effects of Urbanization, Floods and Salmon	WA Dept. of Ecology	2007
Michael O'Neal	Late Little Ice Age Glacier Fluctuations in the Cascade Range of Washington and Northern Oregon	Univ. of Delaware	2005
Christopher Konrad (co-chair)	The frequency and extent of hydrologic disturbances in streams in the Puget Lowland, Washington	U.S. Geological Survey	2000

4.2. Chaired masters degrees (21 total)

Student	Thesis	Thesis/Project Title	Year Completed
Jacob Millard	no		2005
Susan Rosebrough	no		2005
Brent Zacharia	no		2004
Amy Engstrom	yes	Characterizing water quality of urban stormwater runoff	2004
Catalina Segura-Sossa	yes	Characterizing lowland streams: riparian and watershed influences on urban and non-urban channels	2003
Christina Avolio	yes	The local impacts of road crossings on Puget Lowland creeks	2003
Heidi Wachter	yes	Application of the benthic index of biological integrity (B-IBI) to headwater streams within the Puget Lowland	2003
Chase Barton	yes	Applications of a sediment budget to assist urban stream rehabilitation	2003
John Koreny	no		2003
Maeve McBride	yes	Spatial effects of urbanization on physical conditions in Puget Sound lowland streams	2001
Carolyn Butchart	yes	Using air conductivity and soil texture as indicators of infiltration rates for stormwater infiltration ponds	2001

Jay Cammermeyer	yes	The effects of vegetation in highway drainage ditches on flow characteristics and pollutant removal	2001
Shanti Colwell	yes	Characterization of performance predictors and evaluation of mowing practices in biofiltration swales	2000
Kathy Troost	yes	The Olympia nonglacial interval in the southern Puget Lowland	1999
Marit Larson	yes	Effectiveness of LWD in stream rehabilitation projects in urban basins	1999
Erin Nelson	yes	A sediment budget for the Issaquah Creek watershed	1999
Patricia Henshaw	yes	Restabilization of stream channels in urban watersheds	1999
Dalius Gilvydas	no	A meta-analysis of cattle-grazing impacts on salmonid stream habitat quality	1999
Cheryl Dunning	no	Urban stormwater management at Vet Clinic Wetland, McChord AF Base	1998
Jennifer Leavitt	no	The function of urban riparian buffers	1998
Karen Comings	yes	Stormwater pollutant removal by two wet ponds, Lk Sammamish watershed	1998

4.3. UCSB Bren School Group Project supervision

- 2016–2017 [Yuba River Restoration](#)
2015–2016 [Arundo Control in the Santa Clara River Valley](#)
2013–2014 [Reducing Plastic Debris in the Los Angeles and San Gabriel Rivers Watersheds](#)
2012–2013 [Water Action Plan](#)

4.4. Other student supervision

Membership on MS degree committees (not listed; 57 total)

Membership on Ph.D. committees:

Desmond Amin	School of Ecosystems and Forest Sciences, University of Melbourne (external examiner)	2019
Kristine Taniguchi	Geography Department, San Diego State Univ.	2018
Andrew Ayers	Bren School of Env. Sci. & Mgmt., UCSB	2017
Matt Meyers	Bren School of Env. Sci. & Mgmt., UCSB	2017
Brian Collins	Earth and Space Sciences, UW	2009
Christopher Brummer	Earth and Space Sciences, UW	2006
Gregory Williams	Civil & Environmental Engineering, UW	2006
Vivek Shandas	Urban Design and Planning, UW	2005
Karen Gran	Earth and Space Sciences, UW	2005
Jennifer Adams	Civil & Environmental Engineering, UW	2003
Tim Brown	Civil & Environmental Engineering, UW	2003
Stephanie Kampf	Civil & Environmental Engineering, UW	2003
Timothy Abbe	Geological Sciences, UW	2000
Timothy Beechie	Forest Resources, UW	1998
John Buffington	Geological Sciences, UW	1998
Darla Elswick	Civil Engineering, UW	1997

Robert Chandler
Lee Benda

Civil Engineering, UW
Geological Sciences, UW

1995
1994

5. Research Activities

5.1. Sponsored academic research (major awards only shown; total \$8,466,000 in 69 awards)

Agency	Title	Total Award	Role	Status	Start/End Dates
University of California Santa Barbara					
National Park Service	Revising Streambank Stability Metrics for the Tuolumne River Watershed	\$86,000	PI	In Progress	9/22–6/24
National Park Service	Tuolumne River Geomorphic Assessment	\$145,500	PI	Completed	9/19–6/22
National Park Service	Yosemite Valley Merced River Restoration	\$850,035	PI	Completed	7/15–6/20
US Army Corps of Engineers	Conceptual Model for Urban Stream Systems	\$104,893	PI	Completed	10/12–9/14
University of Washington					
US Geological Survey, National Earthquake Hazards Program	The Quaternary Geologic Framework for the Greater Seattle Area	\$225,000	Lead PI	Completed	5/06–12/08
City of Seattle	Geology of the City of Seattle	\$55,000	PI	Completed	1/06–12/06
King County Department of Natural Resources	Groundwater Characterization, Issaquah and Bear Creek Valley Areas	\$108,564	Co-PI	Completed	6/05–3/07
National Science Foundation	Landscape Self-Organization by Ice Sheets	\$597,410	Co-PI	Completed	1/04–12/06
US Geological Survey, National Earthquake Hazards Program	The Quaternary Geologic Framework for the City of Seattle	\$75,000	Co-PI	Completed	1/05–12/05
City of Bainbridge Island	Geology of Bainbridge Island	\$76,000	PI	Completed	4/04–12/04
King County Department of Natural Resources	Groundwater characterization of Vashon-Maury Island	\$75,000	PI	Completed	4/04–12/04
King County	Geologic Database and Interpretations for Regional Wastewater Planning—Phase III	\$100,000	PI	Completed	1/04–12/04
US Geological Survey, National Earthquake Hazards Program	The Quaternary Geologic Framework for the City of Seattle	\$100,000	PI	Completed	1/04–12/04

Seattle Monorail Project	Geologic Support, Seattle Monorail Project	\$63,000	PI	Completed	7/03–6/04
US Geological Survey, National Earthquake Hazards Program	The Quaternary Geologic Framework for the City of Seattle	\$125,000	PI	Completed	1/03–12/03
City of Seattle	High Point Flow and Water Quality Monitoring (Phase 1)	\$125,968	Co-PI	Completed	9/02–8/04
King County	Scientific Review Panel, Normative Flow	\$142,000	PI	Completed	1/02–12/04
King County	Geologic Database and Interpretations for Regional Wastewater Planning—Phase II	\$676,000	PI	Completed	8/01–12/03
USEPA, Puget Sound Water Quality Action Team	Alternative Futures Analysis for Watershed Protection	\$60,000	PI	Completed	5/01–6/04
US Geological Survey, National Earthquake Hazards Program	The Quaternary Geologic Framework for the City of Seattle	\$340,000	PI	Completed	1/01–12/02
US Environmental Protection Agency	Application of Remotely-Sensed Data to Regional Analysis and Assessment of Stream Temperature	\$998,395	Co-PI	Completed	4/00–3/03
National Science Foundation	The Impact of Urban Patterns on Ecosystem Dynamics	\$424,970	Co-PI	Completed	9/99–3/03
City of Seattle Public Utilities	Instream gravel management of Seattle's urban creeks	\$103,880	Lead PI	Completed	6/00–6/02
King County	Geologic Database and Interpretations for Regional Wastewater Planning—Phase I	\$75,000	PI	Completed	5/01–12/01
City of Seattle	Geology of the City of Seattle	\$330,000	PI	Completed	8/99–12/03
City of Seattle	Evaluation of Ultra-Urban Stormwater Management Strategies	\$70,000	Co-PI	Completed	8/99–7/00
US Geological Survey, National Earthquake Hazards Program	The Quaternary Geologic Framework for the City of Seattle	\$140,000	PI	Completed	11/98–10/99
USEPA, Office of Water	Conducting watershed mgmt. training—the “Watershed Academy”	\$120,000	Lead PI	Completed	4/98–9/00

King Co. Water and Land Resources Division	Stream Monitoring, Urban Planned Developments	\$390,000	PI	Completed	1/98–12/01
USEPA	Rehabilitation of Urban Streams	\$663,000	Co-PI	Completed	4/97–12/00
King Co. Water and Land Resources Division	Stormwater Management Facilities Evaluation	\$54,000	PI	Completed	9/96–8/98
King Co. Surface Water Management Division	King County Watershed Support and Technical Assist.	\$225,000	PI	Completed	5/96–12/01

5.2. Representative other non-academic projects (~160 total)

Agency	Title	Total Award	Role	Status	Start/End Dates
Arroyo Seco Foundation	Brown Mountain Dam removal alternatives	\$150,000	PM and technical lead	In progress	12/2022–6/2024
Stillaguamish Tribe of Indians	North Fork Stillaguamish floodplain restoration	\$200,000	Geomorphic lead	In progress	2/2022–12/2023
King County	Lones Levee removal and floodplain restoration	\$1.2M	Geomorphic lead	Completed (project constructed)	9/2018–9/2022
US Bureau of Reclamation	Bonanza Reach reclamation and restoration	\$1.5M	Geomorphic lead	Completed (project constructed)	6/2016–10/2017
Ventura County Watershed Protection District	Matilija Dam removal alternatives analysis	\$500,000	Geomorphic lead	In progress	2/2015–12/2024(?)
Cascade Columbia Fisheries Enhancement Group	Reach Assessment, Methow River	\$90,000	Geomorphic lead	Completed	5/2014–6/2016
California State Ocean Protection Council	Santa Maria instream flows protection	\$600,000	PM and technical lead	Completed	9/2010–4/2012
California State Coastal Conservancy	Santa Clara River Watershed geomorphic assessment	\$300,000	Geomorphic lead	Completed	2/2007–12/2011

6. Teaching

6.1. Regular courses

Course Number/ID	Title	Year(s) taught	Credit hours	Enrollment
ESS 490/590C (U of WA)	Fluvial Geomorphology	2021	3	18
ESM 235 (UCSB)	Watershed Analysis	2014 (fall)	4	20
ESM 235 (UCSB)	Watershed Analysis	2014 (winter)	4	12
ESM 203 (UCSB)	Earth System Sciences	2013	4	72
ESS 426 (U of WA)	Fluvial Geomorphology	1985, 1989, 1991, 1997, 2001, 2002, 2006	7	16–22
GEOL 313 (U of WA)	Environmental Geology	1984–1995	4	40–96

6.2. Other teaching

Washington Department of Fish and Wildlife, 1-day short course on *Geomorphology of Rivers, Streams, and Watersheds*, sole instructor, May 23, 2013.

Washington Department of Fish and Wildlife, 2-day short course on *River and Stream Geomorphology*, sole instructor, June 29–30, 2011.

University of Washington, lead instructor, Certificate Program in Stream Restoration, Fall 2010 (<http://www.pce.uw.edu/prog.aspx?id=4100>).

Association of Engineering Geologists, 2-day short course, Engineering and Quaternary Geology of the Puget Lowland (Co-Instructor of 2), September 17–18, 2009.

American Fisheries Society, Western Division meeting, workshop on Stream Restoration: Integrating Practical Approaches, invited speaker, *Rehabilitation of urban streams—philosophy and approaches*, Portland, OR, May 8, 2008.

Stormcom Workshop and Exposition, regional conference, co-instructor for *Monitoring and Flow Control* tracks, SeaTac, WA, December 1, 2006.

The Center for Watershed Protection, *Watershed Protection Institute*, co-lead organizer and instructor, Bainbridge Island, WA, September 13–17, 2004.

The Ohio State University, STREAMS Channel Protection and Restoration Conference, *Understanding and preventing urbanization impacts of stream health*, October 6, 2003.

The Center for Watershed Protection, *Watershed Protection Institute*, invited guest instructor, Baltimore, MD, September 22–25, 2003.

U.S. Environmental Protection Agency, short course on *Fluvial Geomorphology*, co-lead instructor, June 11–14, 2001, Seattle, WA.

U.S. Environmental Protection Agency, The Watershed Academy: *Working at a Watershed Level*: Co-Lead Instructor, September 20–24, 1999, University of Washington campus.

Co-Convener, *Seattle Urban Geologic Hazards Workshop*: sponsored by U.S. Geological Survey and Center for Urban Water Resources Management, University of Washington campus, February 23–25, 1999.

U.S. Environmental Protection Agency, The Watershed Academy: *Working at a Watershed Level*: Co-Lead Instructor, September 21–25, 1998, University of Washington campus.

University of Washington—Center for Urban Horticulture, Continuing Education:

Managing for Slope Stability: Geology and Hydrology Review (1.5-hour lectures) Jan. '96, Mar. '98

University of Washington-Engineering Professional Programs (12-hour courses):

Engineering and Quaternary Geology of the Puget Lowland (Co-Instructor of 2), April '99, Sept. '00, May '03.

Alternative On-site Stormwater Management (Co-Instructor of 3), Sept. '97, Mar. '99.
Geology and Geomorphology of Stream Channels (Lead Instructor), Mar. '96, Jan. '97, Nov. '98, Feb. '00, Sept. '01, Mar. '03, May '04.

Fundamentals of Urban Surface Water Management (Co-Instructor of 2), Sept. '95, Nov. '96, Jan. '98, Oct. '99, March '01, Sept. '02.

7. Community Service (2006–present)

7.1. Local and regional service

Invited panel member, Wildfire Prevention and Policy Lecture Series, UC Santa Barbara, May 11, 2023.

Member, Salmon Science Advisory Group (Puget Sound Partnership, WA), 2021–ongoing.

Member, Los Angeles River Instream Flow Technical Advisory Committee, 2018–ongoing.

Member, Cheadle Center for Biodiversity and Ecological Restoration Advisory Board, UC Santa Barbara, 2014–ongoing.

Member, North Campus Open Space Science Advisory Board, UC Santa Barbara, 2013–ongoing.

Member, Santa Barbara Botanic Garden Research and Education Advisory Committee, 2013–ongoing.

Member, expert review panel on restoration strategy for the Chehalis River watershed, Washington Department of Natural Resources, 2015.

Member, expert review panel, proposed City of Seattle response to combined sewer overflows under Consent Decree with US Environmental Protection Agency, 2013.

Member, expert review panel on ecological mitigation for the North Reach of the Willamette River, Portland, Oregon, 2010.

Member, expert review panel for the Independent Multidisciplinary Science Team for the State of Oregon, report on The Effects of Urban and Rural-Residential Land Use on Wild Salmonids, 2009.

Member, expert panel on “Impacts from urban growth—hydromodification design of new development,” Santa Barbara County, Project Clean Water, 2009.

Member, expert panel to develop guidance protection of marine shorelines, Washington SeaGrant, University of Washington, Seattle, 2008.

7.2. National service

External review panel member, 2023 Gulf Coast Ecosystem Restoration Council awards

External review panel member, 2021 Delta Science Awards

Editorial Board, Watershed Science Bulletin, 2010–present

External panel member, Lake Tahoe peer review of Threshold Evaluation Report, 2016.

Editorial Board, Quaternary Science Reviews, 2015–2017

Member, Flood Control 2.0 National Science Advisory Team (San Francisco Bay area) (2015–2016)

Invited panelist, environmental benefits assessment for national regulations on surface water impacts from urban stormwater discharges, USEPA, Washington, DC, June 2010.

External review panel member, University of Maryland Baltimore County, graduate program in “Water in the Urban Environment” (2009).

National Research Council, National Academies, committee member, “Urban Stormwater Management in the United States” (2007–2009).

Geological Society of America, Annual Meeting General Chair (Seattle, WA, 2003)