

## **Jeffrey Hawkins Writer**

Instructor, CU Teach, Environmental Engineering  
University of Colorado, UCB 429, Boulder, CO 80309  
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### **EDUCATION**

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#### **Ph.D., Environmental Engineering, University of Colorado: Boulder, 2010 (GPA 4.0)**

Dissertation title: *Effect of the epilithon on fate and transport of steroidal hormones and alkylphenols in surface waters* (Thesis advisors Dr. Joe Ryan and Dr. Larry Barber)

#### **Teacher Certification, University of Colorado: Boulder, 1997**

#### **M.S., Environmental Engineering, University of Colorado: Boulder, 1992**

#### **B.A., Materials Science Engineering, Brown University, 1987**

### **TEACHING EXPERIENCE**

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#### **University of Colorado: Boulder, 2007-present**

Instructor, Department of Civil, Architectural and Environmental Engineering: Fundamentals of Environmental Engineering (CVEN 3414), Applied Stream Ecology (CVEN 5323), Applied Ecology (CVEN 3434)

Instructor, School of Education: Step 1(EDUC 2020), Step 2(EDUC 2030), Project Based Instruction (EDUC 5385), Teaching and Learning Earth Systems (EDUC 4833/5833)

#### **Crested Butte Community School, 2000-2004, 2006-2007**

Instructor, Chemistry, Physics, AP Environmental Science, Geology, Astronomy, Biology, 7<sup>th</sup> Grade Life Science

#### **American Overseas School of Rome, 2004-2006**

Instructor, AP Chemistry, IB Chemistry, Chemistry

#### **Centaurus High School, 1997-2000**

Instructor, Chemistry, Geology

### **TEACHING AWARDS**

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#### **2008 Boettcher Foundation Teacher Recognition Award**

State-wide recognition as an influential and inspirational teacher

#### **2002 Colorado Conservation Teacher of the Year**

Recognized for project involving high school students in a mined-land reclamation project.

#### **1997 Colorado Association of Storm water and Floodplain Managers Excellence Award**

In recognition of Watershed program developed with City of Boulder to educate students and community on water resource issues.

### **RESEARCH EXPERIENCE**

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#### **U.S. Geological Survey, Boulder, Colorado, 1990-1992, 1994, 1999, 2007-present**

Research Hydrologist- research focuses on the fate and transport of emerging contaminants, with a particular emphasis on endocrine-disrupting compounds. Evaluating carbon and nutrient export from burned watersheds, effects on aquatic ecosystem, and implications for drinking water utilities. Studies utilized hydrologic tracer experiments, and linked chemical and ecological data with mathematical modeling techniques to better understand the complexities of contaminant

transport and impact on aquatic ecosystems. Experienced in multiple analytical techniques, design and implementation of surface water investigations.

**University of Colorado: Boulder, 2007-2013**

Graduate Research Assistant- research focuses on the role of stream biofilms in controlling fate and transport of endocrine disrupting compounds and impacts on stream ecology.

Post-doctorate Research Associate – research focused on the fate pharmaceuticals in streams and developing methods for assessing in-stream attenuation of trace organic compounds.

**ADDITIONAL RELEVANT EXPERIENCE**

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**Independent Scientist/Consultant, 1996-present**

Environmental consulting for various communities, land preservation organizations, and government agencies

**Boulder Creek Watershed Initiative, 1996-2000**

Co-founder and president of non-profit organization focused on increasing community awareness and participation in local water and environmental issues.

**PTI Environmental Services, 1993-1996**

Environmental Engineer

**Interpro, 1993**

Environmental Engineer

**ERM-Rocky Mountain, 1988-1990**

Environmental Engineer

**SERVICE**

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Faculty Scholar for the School of Environment and Sustainability at the University of Colorado. Developing curriculum for new school.

Vice-president of the Standard Mine Technical Advisory Group and an active member of the Coal Creek Watershed Working Group.

Performed projects for Water For People, including watershed studies and development of a network of non-government organizations concerned with safeguarding human health and providing safe water supplies in Guatemala and Ecuador.

Graduate advisor for Discovery Learning Apprentice Program at the University of Colorado. Mentored numerous undergraduate and graduate students.

Elected teacher representative for the Gunnison County Educational Association.

Reviewer for USGS, Texas Sea Grant Program, Environmental Science and Technology (*Excellence in Review Award 2014*), Science of the Total Environment, Water Research, Water Resources Research.

**PUBLICATIONS**

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Murphy, S.F., Writer, J.H., McCleskey, R.B., and Martin, D.A., 2015, The role of precipitation type, intensity, and spatial distribution in source water quality after wildfire: Environmental Research Letters, v. 10, no. 8, 084007: 1-13. <http://dx.doi.org/10.1088/1748-9326/10/8/084007>

Writer JH, Hohner A, Oropeza J, Schmidt A, Cawley K, Rosario-Ortiz FL. 2014. Water treatment implications after the High Park Wildfire, Colorado. *Journal of the American Water Resources Association*. 106:E189-E199, (DOI: <http://dx.doi.org/10.5942/jawwa.2014.106.0055>)

- Bradley, P.M., and Writer, J.H., 2014. Effect of light on biodegradation of estrone, 17 $\beta$ -estradiol, and 17 $\alpha$ -ethinylestradiol in stream sediment. *Journal of the American Water Resources Association*. 50(2), p. 334-342.
- Antweiler RC, Writer JH, Murphy SF. 2014. Evaluation of wastewater contaminant transport in surface waters using verified Lagrangian sampling: *Science of the Total Environment*. 470–471, p. 551-558.
- Writer JH, Antweiler RC, Ferrer, I, Thurman ME, Ryan, JN. 2013. In-stream attenuation of neuro-active pharmaceuticals and their metabolites. *Environmental Science and Technology*. ([doi.org/10.1021/es402158t](https://doi.org/10.1021/es402158t))
- Writer, J.H., Ferrer, I., Barber, L.B., Thurman, E.M., 2013, (*Editor's choice as one of the top papers of 2013*) Widespread occurrence of neuro-active pharmaceuticals and metabolites in 24 Minnesota rivers and wastewaters. *Science of the Total Environment* 461-462: 519–527, <http://dx.doi.org/10.1016/j.scitotenv.2013.04.099>.
- Writer JH, Keefe, SK, Barber LB, Ryan JN. 2012. Fate of 4-nonylphenol and 17 $\beta$ -estradiol in the Redwood River of Minnesota. *Environmental Science and Technology* ([doi.org/10.1021/es2031664](https://doi.org/10.1021/es2031664))
- Barber LB, Vajda AM, Douville, C, Norris DO, Writer JH. 2012. Fish Endocrine Disruption Responses to Wastewater Treatment Plant Infrastructure Modifications and Long-Term Variability in Contaminant Sources *Environmental Science and Technology* ([doi.org/10.1021/es202880](https://doi.org/10.1021/es202880))
- Writer, J.H., and Murphy, S.F., 2012, Wildfire effects on source-water quality—Lessons from Fourmile Canyon fire, Colorado, and implications for drinking-water treatment: U.S. Geological Survey Fact Sheet 2012–3095, 4 p. <http://pubs.usgs.gov/fs/2012/3095/>
- McCleskey, R.B., Writer, J.H., and Murphy, S.F., 2012, Water Chemistry Data for Surface Waters Impacted by the Fourmile Canyon Wildfire, Colorado, 2010-2011: U.S. Geological Survey Open-File Report 2012-1104.
- Barber, L.B., Writer, J.H., Keefe, S.H., Brown, G.K., Ferrey, M.L., Jahns, N.D., Kiesling, R.L., Lundy, J.R., Poganski, B.H., Rosenberry, D.O., Taylor, H.E., Woodruff, O.P., and Schoenfuss, H. L., 2012, Endocrine disrupting chemicals in Minnesota lakes—Water-quality and hydrological data from 2008 and 2010: U.S. Geological Survey Open-File Report 2012–1124, 53 p.
- Writer, J.H., McCleskey, R.B., and Murphy, S.F., 2012, Effects of wildfire on source-water quality and aquatic ecosystems, Colorado Front Range, in *Wildfire and Water Quality; Processes, Impacts, and Challenges*, International Association of Hydrological Sciences Publication 354:117–122, Wallingford, Oxfordshire, UK.
- Murphy, S.F., McCleskey, R.B., and Writer, J.W., 2012, Effects of flow regimes on stream turbidity and suspended solids after wildfire, Colorado Front Range, in *Wildfire and Water Quality; Processes, Impacts, and Challenges*, International Association of Hydrological Sciences Publication 354, p. 51–58, Wallingford, Oxfordshire, UK.
- Writer JH, Ryan JN, Barber LB. 2011. Role of biofilms in sorption of steroidal hormones and 4-nonylphenol compounds. *Environmental Science and Technology* 45: 7275-7283. (<http://pubs.acs.org/doi/abs/10.1021/es2008038>)

- Writer JH, Ryan JN, Barber LB, and Bradley PM. 2011. Biodegradation and attenuation of steroidal hormones and alkylphenols by stream biofilms and sediments. *Environmental Science and Technology* 45: 4370-4376. ([doi.org/10.1021/es2000134](https://doi.org/10.1021/es2000134))
- Writer JH, Keefe SK, Ryan, JN, Ferrer I, Thurman ME, Barber LB. 2011. Methods for evaluating in-stream attenuation of trace organic compounds. *Applied Geochemistry* ([doi:10.1016/j.apgeochem.2011.03.071](https://doi.org/10.1016/j.apgeochem.2011.03.071))
- Murphy SF and JH Writer 2011 Evaluating the effects of wildfire on stream processes in a Colorado Front Range watershed, USA. *Applied Geochemistry* ([doi:10.1016/j.apgeochem.2011.03.061](https://doi.org/10.1016/j.apgeochem.2011.03.061))
- Lee, KE, Langer, SK, Barber LB, Writer JH, and others. 2011, Endocrine active chemicals, pharmaceuticals, and other chemicals of concern in surface water, wastewater-treatment plant effluent, and bed sediment, and biological characteristics in selected streams, Minnesota—design, methods, and data, 2009: U.S. Geological Survey Data Series 575, 54 p., with appendixes.
- Writer JH, Brown GK, Taylor HE, Schoenfuss HL, Jahns ND, Bartell SE, Kiesling RL, Ferrey ML, and Barber LB. 2010. Anthropogenic Tracers, Endocrine Active Chemicals, and Endocrine Disruption in Minnesota Lakes not Impacted by Point-Source Discharges. *Science of the Total Environment* 409:100-111. ([doi.org/10.1016/j.scitotenv.2010.07.018](https://doi.org/10.1016/j.scitotenv.2010.07.018))
- Barber LB and Writer JH. 1998. Impact of 1993 flood on the distribution of organic contaminants in bed sediments of the Upper Mississippi River. *Environmental Science and Technology* 32: 2077-2083.
- Trousdale WJ and JH Writer. 1997. Interdisciplinary watershed assessment in “buffer zone” communities near Podocarpus National Park. *Environmental Planning Quarterly* 14:1.
- Writer JH, Leenheer JA, Barber LB, Amy GL, and Chapra SC. 1995. Sewage contamination of the Upper Mississippi River as measured by the fecal sterol, coprostanol. *Water Research*. 29:1427-1436.

## **PROFESSIONAL AFFILIATIONS**

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Institute of Arctic and Alpine Research, Center for Water, Earth Science, and Technology, American Chemical Society, American Society of Limnology and Oceanography, American Geophysical Union, National Science Teachers Association.