

# ANDREW P. STUBBLEFIELD

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## UNIVERSITY EDUCATION

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University of California, Davis. Ph.D. in Watershed Hydrology received August 2002. Hydrological Sciences Graduate Group. Dissertation: "Spatial and Temporal Dynamics of Watershed Sediment Delivery, Lake Tahoe, California" Advisor: Dr. C.R. Goldman. Coursework: Hydrology, Biology and Management of Regulated Rivers, Sediments and Strata, Soil Chemistry, Soil Physics, Fluvial Geomorphology, Scientific Visualization, Toxicants in the Environment, Environmental Risk Assessment with GIS.

Program in College Teaching. Teaching Resources Center, University of California, Davis. 1999/2000.

University of Michigan, Ann Arbor, Michigan. M.S. in Terrestrial Ecosystem Science received May 1994. School of Natural Resources and Environment. Thesis: "Spatial and Temporal Heterogeneity of Gypsy Moth Defoliation Using Aerial Infrared Photogrammetry." Advisor: Dr. J.R. Witter. Coursework: Woody Plants, Forest Ecology, Soil Dynamics, Data Analysis, Remote Sensing, Natural Resources Administration and Management.

Oberlin College, Ohio. B.A. in Biology received May 1990. Coursework: Plant Systematics, Plant Biology, Plant Ecology, Geology, Environmental Studies.

Cornell University, Shoals Marine Laboratory, Appledore Island, New Hampshire. Coursework: Adaptations of Marine Organisms, and Ecology of Animal Behavior.

School for International Training, Semester Abroad Program: Thailand. Independent Project: "A monk's role in preventing deforestation, Chang Mai, Thailand".

## PROFESSIONAL SELF-IMPROVEMENT ACTIVITIES

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Semester of Introductory Spanish. Humboldt State University Spring 2012.

Sabbatical Year in Nicaragua. 2012-2013. Lived in northern Nicaragua. Took one hundred hours of individual Spanish instruction. As a research associate with Catholic Relief Services, Nicaragua, conducted studies of the water quality impacts of coffee depulping mills and the water quality of the groundwater resources of the Sebaco Valley.

Student Success Day. 2007-2016. Participated in twice-annual full day in-service trainings offered by Humboldt State University on active learning techniques, teaching for inclusive success, advising, and other pedagogical topics.

Fire Ecosystem Forest Management and Water Yield Symposium. May 2014. United States Forest Service Pacific Southwest Region 5. USFS Wildland Fire Training Center, McClellan, CA. Symposium was equivalent to 6.5 Continuing Forest Education Credits from the Society of American Foresters.

## PEER-REVIEWED PUBLICATIONS

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\* denotes a graduate student under my supervision.

Flannery\*, J., **A.P. Stubblefield**, Fiore, R., and C. Shea. 2016. Observations of channel change from constructed wood jams on a forested gravelbed stream. *Transactions of the American Fisheries Society*. 146(1): 181-193.

Harrison\*, N.M., **A.P. Stubblefield**, J.M. Varner and E.E. Knapp. 2016. Finding balance between fire hazard reduction and erosion control in the Lake Tahoe Basin, California-Nevada. *Forest Ecology and Management* 360: 40-51.

Bond\*, R.M., **A.P. Stubblefield**, and R.W. Van Kirk. 2015. Sensitivity of summer stream temperatures to climate variability and riparian restoration strategies. *Journal of Hydrology: Regional Studies* 4: 267-279.

McNeeley, S., M. Lintner, C. Kirchhoff, D. Kauneckis, I. Ferguson, J. Gurdak, J. Brugger, J. Lee, L. Dilling, R. Pallav, S. Tessororf, S. Attari, S. Kampf, T. Heikkila, K. Mahoney, **A.P. Stubblefield**, M. Schoen, S. Staplets, A. South, J. Arrigo, and H. Lazrus. 2012. Catalyzing Frontiers in Water-Climate-Society Research: A View from Early Career Scientists and Junior Faculty. *Bulletin of the American*

*Meteorological Society*. DOI:10.1175/BAMS-D-11-00221.1

**Stubblefield, A.P.**, M. Kaufman\*, G. Blomstrom, and J. Rogers. 2012. Summer water use by mixed-age and young forest stands, Mattole River, Northern California, USA. *United States Forest Service General Technical Report: Coast Redwoods in a Changing California*, a Symposium for Scientists and Managers. PSW-GTR-238

Madrone\*, S., and **A.P. Stubblefield**. 2012. Fine sediment sources in coastal watersheds with uplifted marine terraces in Northwest Humboldt County, California. *United States Forest Service General Technical Report: Coast Redwoods in a Changing California*, a Symposium for Scientists and Managers. PSW-GTR-238

Parker\*, T., and **A.P. Stubblefield**. Fluorometry as a bacterial source tracking tool in coastal watersheds, Trinidad, CA. *United States Forest Service General Technical Report: Coast Redwoods in a Changing California*, a Symposium for Scientists and Managers. PSW-GTR-238

Maurin\*, L.P., and **A.P. Stubblefield**. 2011. First-Year Erosion Responses Following Stream Channel Crossing Fill Removal, Northern California, USA. *Ecological Restoration*. 29 (4) 382-391.

**Stubblefield, A.P.**, J.E. Reuter, and C.R. Goldman. 2009. Sediment budget for subalpine watersheds, Lake Tahoe California, USA. *Catena* 76: 163-172.

**Stubblefield, A.P.**, J.E. Reuter, R.A. Dahlgren, and C.R. Goldman. Suspended sediment flux and the use of turbidometry in the Lake Tahoe basin. *Hydrological Processes*. 21:281-291. 2007.

**Stubblefield, A.P.**, M.I. Escobar, E.W. Larsen. Retention of suspended sediment and phosphorus on a freshwater delta, South Lake Tahoe, California. *Wetlands Ecology and Management*. 14:287-302. 2006.

**Stubblefield, A.P.**, S. Chandra, S. Eagan, T. Dampil, G. Davaadorzh, D. Gilroy, J. Sampson, B. Allen, J. Thorne, Z. Hogan. Impacts of goldmining and land use alterations on the water quality of central Mongolian rivers. 2005. *Integrated Environmental Assessment and Management*. 1(4): 365-373.

#### CONFERENCE PROCEEDINGS AND TECHNICAL REPORTS

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**Stubblefield, A.P.**, Harrison, N., Beach, S., and M. Haskins. Railroad Gulch Best Management Practices Evaluation Elk River Watershed Monitoring In-Stream Effectiveness and Timber Harvest Plan

Implementation. 2016. Technical Report prepared for the California Department of Forestry and Fire Protection. 82 pp.

O'Dowd, A. and **A.P. Stubblefield**. 2013. Stream Condition Assessment of the Lake Tahoe Basin in 2009 and 2010 using the River Invertebrate Prediction and Classification System (RIVPACS). Technical Report to the Tahoe Regional Planning Agency. 51 pp.

**Stubblefield, A.P.**, P. Hicks, M. Sheridan, and A. Kline. 2013. Beyond the quality of the water in your cup: coffee and water resources at origin. *Specialty Coffee Chronicle*. Specialty Coffee Association of America. 2013 issue no. 3.

Royer\*, C.F., and **A.P. Stubblefield**. 2009. Klamath River Basin Water Quality Monitoring Plan. Report assembled for the Klamath Basin Monitoring Program, a multi-state stakeholder group consisting of over 40 agencies, tribal nations and non-profit organizations.

Huggett\*, B.W., **A.P. Stubblefield**, A.S. Dhakal, and K. Sullivan. 2009. Distributed Hydrology Soil Vegetation Model (DHSVM) and Sediment Discharge Validation in a small, Pacific Northwestern Watershed. *EOS Trans. AGU 90 (52)*, Fall Meet, Suppl., Abstract H11E-0849.

Huggett\*, B.W., **A.P. Stubblefield**, A.S. Dhakal, and K. Sullivan. 2008. Distributed Hydrology Soil Vegetation Model (DHSVM) and Sediment Discharge in a Small, Timber Production Watershed, Humboldt County, California. *EOS Trans. AGU 89 (53)*, Fall Meet. Suppl., Abstract H11E-0824.

**Stubblefield, A.P.**, P.J. Whiting, G. Matisoff, C. Fondran, and M.E. Ketterer. Radionuclide and rare earth element tracers of erosional processes on the plot scale. *Proceedings of the 8<sup>th</sup> Federal Interagency Sedimentation Conference*. Reno, Nevada. April 3-6, 2006.

**Stubblefield, A.P.**, J.E. Reuter, E.W. Larsen, M.I. Escobar C.R. Goldman. Turbidity measurements for determination of sediment source and retention in river and marsh environments. *Proceedings of the 8<sup>th</sup> Federal Interagency Sedimentation Conference*. Reno, Nevada. April 3-6, 2006.

**Stubblefield, A.P.** Sediment Loading and Stream Channel Condition in Ward and Blackwood Creeks. Development of TMDL Work Products. Report to the California Regional Water Quality Control Board. October 2002.

Reuter, J.E., **A.P. Stubblefield**, T.J. Swift. Sediment Sources in the

Tahoe Basin, chapter in Lake Tahoe Watershed Assessment. United States Forest Service Report. Presidential Deliverable. January 2000.

Grismer, M.E., H.L. Shepherd, **A.P. Stubblefield**. Winery wastewater treatment efficiency as it depends on depth and distance in a subsurface flow wetland. In: *Proc. of the 27<sup>th</sup> International Association of Hydrologic Research Congress on Water for a Changing Global Community*. San Francisco, California. 1997.

#### MANUSCRIPTS IN PEER-REVIEW

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Queener, N., and **A.P. Stubblefield**. Spatial and Temporal Variability in Baseflow and Stream Drying in the Mattole River Headwaters, California, USA. In revision after submission to *Hydrology and Earth System Sciences*.

**Stubblefield, A.P.**, Beach, S., Harrison, N., and M. Haskins\*. Watershed-Scale Evaluation of Humboldt Redwood Company's HCP Timber Harvest Best Management Practices, Railroad Gulch, Elk River, California. Accepted for inclusion in: *United States Forest Service General Technical Report: Proceedings of the Coast Redwood Forest Symposium, Eureka, CA. September 13-15, 2016*.

#### MANUSCRIPTS IN PREPARATION

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**Stubblefield, A.P.**, G. Matisoff, P.J. Whiting, C. Fondran. Comparison of Cs<sup>137</sup> and Pu<sup>239+240</sup>-determined soil erosion rates. In preparation for submission to *Applied Radiation and Isotopes*.

Stubblefield, A.P. and K. Reddy. Water use by Douglas fir stands in thinned and unthinned conditions. In preparation for submission to *Forest Ecology and Management*.

Stubblefield, A.P. and P. Hicks. Surface and groundwater quality assessment in Northern Nicaragua. In preparation for submission to *Journal of Hydrology Regional Studies*.

#### PRESENTATIONS

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\* denotes a graduate student under my supervision

**Stubblefield, A.P.**, Harrison, N., Beach, S., Haskins\*, M., and L. MacDonald. Paired Watershed Study of Suspended Sediment Sources in a Watershed Undergoing Road-Building and Timber Harvest, Railroad Gulch, coastal Northern California, USA. Presentation at the American Geophysical Union Meeting. December 2016. San Francisco, California.

**Stubblefield, A.P.**, Harrison, N., Beach, S. and M. Haskins\*.

Watershed-Scale Evaluation of Humboldt Redwood Company's HCP Timber Harvest Best Management Practices, Railroad Gulch, Elk River, California. Oral presentation Coast Redwood Forest Symposium, Eureka, CA. September 13-15, 2016.

**Stubblefield, A.P.**, Harrison, N., Beach, S. and M. Haskins\*. Railroad Gulch Best Management Practices Evaluation: A Paired Management Study. Presentation to the California Board of Forestry and Fire Protection Monitoring Effectiveness Committee. May 2016, Redding, CA.

Queener\*, N., **A.P. Stubblefield**. Spatial and temporal variability in baseflow magnitude and dry stream channels in the Mattole River headwaters: implications for salmonids and restoration. Oral presentation at Salmonid Restoration Conference, April 2016, Fortuna, CA.

Bond\*, R., **A.P. Stubblefield**. Quantifying Legacy Impacts on Summer Stream Temperatures and Potential Riparian Reforestation Strategies. Oral presentation at Salmonid Restoration Conference, April 2016, Fortuna, CA.

**A.P. Stubblefield**. CAMBIO: adapting to a changing student demographic with experiential learning and research opportunities related to forests, rangelands, and watersheds. Poster presentation at USDA National Institute of Food and Agriculture Hispanic Serving Institutions Conference, Dec 2015. Washington, D.C.

**A.P. Stubblefield**. Forest Water Demands. Oral Presentation to UC Cooperative Extension Conference: Redwood Region Forest Management and Market Opportunities. May 2015. Eureka, California.

Queener, N.\* and **A.P. Stubblefield**. Patterns in summer baseflow, dry stream reaches and relationships to basin characteristics in the Mattole River Headwaters. Poster presentation to Salmonid Restoration Conference. March 2015. Santa Rosa, California.

**A.P. Stubblefield**. CAMBIO: adapting to a changing student demographic with experiential learning and research opportunities related to forests, rangelands, and watersheds. Poster presentation at Agriscience Education for the 21<sup>st</sup> Century Conference, Nov. 2014. Miami, Florida.

**A.P. Stubblefield**. 2014. Forest Health and Water Yield: an Example from the Mattole River Watershed. Oral Presentation to Eel River Recovery Project: Water Day. April 2014. Redway, California.

**A.P. Stubblefield.** 2014. The Biggest Thing that Ever Happened. Climate Change and the Future of the Biosphere. Oral Presentation at the Sierra Club, Humboldt County Chapter. April 2014. Eureka, California.

M. Flores, **A.P. Stubblefield**, P. Hicks. 2013. Coffee Clearwater Revival. Lecture Series, Specialty Coffee Association of America Annual Meeting. March 2013. Boston, Massachusetts.

Bond\*, R.M., **A.P. Stubblefield.** 2013. Modeling Climate Change and Thermal Restoration Strategies in a northern California Stream using Heat Source and Distributed Temperature Sensing Fiber-Optics. Poster Presentation at the American Geophysical Union Meeting. December 2013. San Francisco, California.

Bond\*, R.M., **A.P. Stubblefield.** 2013. Using Distributed Temperature Sensing to locate and quantify thermal refugia: insights into radiative and hydrologic processes. Poster presentation at the 31st Annual Salmonid Restoration Conference March 2013 in Fortuna, California.

Bond\*, R.M., **A.P. Stubblefield.** 2012. Using Distributed Temperature Sensing to Locate and Quantify Thermal Refugia, Insights Into Radiative and Hydrologic Processes. Oral Presentation at the American Geophysical Union Meeting. December 2012. San Francisco, California.

Whiting, P., **A.P. Stubblefield.** G. Matisoff, C. Fondran. Integrated set of methods for evaluating soil erosion and transport. Poster Presentation at Geological Society of America Meeting. October 2011. Minneapolis, Minnesota.

Benegar\*, J., R. Fiore, **A.P. Stubblefield.** Experimental Reintroduction of Complex Wood Jams in a Redwood Coastal Stream in Northern California. Oral Presentation at Coast Redwoods in a Changing California, a Symposium for Scientists and Managers. July 2011. Santa Cruz, California.

Madrone\*, S., **A.P. Stubblefield.** Fine sediment sources in coastal watersheds with uplifted marine terraces in Northwest Humboldt County, California. Oral Presentation at Coast Redwoods in a Changing California, a Symposium for Scientists and Managers. July 2011. Santa Cruz, California.

Parker\*, T., **A.P. Stubblefield.** Fluorometry as a bacterial source tracking tool in coastal watersheds, Trinidad, CA. Oral Presentation

at Coast Redwoods in a Changing California, a Symposium for Scientists and Managers. July 2011. Santa Cruz, California.

**Stubblefield, A.P.**, M. Kaufman, G. Blomstrom, J. Rogers. Summer water use by mixed-age and young forest stands, Mattole River, Northern California, USA. Oral Presentation at Coast Redwoods in a Changing California, a Symposium for Scientists and Managers. July 2011. Santa Cruz, California.

**Stubblefield, A.P.**, B. Huggett\*. Application of the Distributed Hydrology Soil Vegetation Model (DHSVM) to a Northern California coastal watershed. Poster Presentation at National Center for Atmospheric Research Junior Faculty Forum. July 2010. Boulder, Colorado.

Benegar\*, J., R. Fiore, **A.P. Stubblefield**. Evaluation of a complex wood jam restoration on instream habitat heterogeneity. Poster Presentation at Salmonid Restoration Conference: Fisheries Restoration and Science in a Changing Climate, March 2010. Redding, CA.

Royer\*, C.F., **A.P. Stubblefield**. Watershed Management in the Klamath Basin Using NHD-Plus: Estimating the Impacts of Post-Fire Erosion on Salmon Habitat. Poster Presentation at Salmonid Restoration Conference: Fisheries Restoration and Science in a Changing Climate, March 2010. Redding, CA.

Royer\*, C.F., **A.P. Stubblefield**, S. Steinberg, T. Uyeki, S. Eliason. A Foundation for Coordinated Water Quality Monitoring in the Klamath Basin. Oral presentation at the Klamath Basin Science Conference. February 2010. Medford, Oregon.

**Stubblefield, A.P.**, P.J. Whiting, G. Matisoff, C. Fondran, C. Wilson. Delivery of nutrients by rill and sheet erosion in agricultural settings. Oral presentation at the Joint Geological Society of America - Soil Science Society of America Meeting. October 2009. Houston, Texas.

Huggett\*, B., **A.P. Stubblefield**, Dhakal, A.S., Sullivan, K. 2009. Distributed Hydrology Soil Vegetation Model (DHSVM) and Sediment Discharge Validation in a small Pacific Northwestern watershed. Poster presentation at the American Geophysical Union Meeting. December 2009. San Francisco, California.

Royer\*, C.F., **A.P. Stubblefield**, S. Steinberg, T. Uyeki, S. Eliason. Building a Foundation for Coordinated Water Quality Monitoring in the Klamath Basin. Oral Presentation at American Water Resources

Association Annual Water Resources Conference, November 9-12, 2009. Seattle, Washington.

Huggett\*, B., **A.P. Stubblefield**. Distributed Hydrology Soil Vegetation Model (DHSVM) and Sediment Discharge in a Small, Timber Production Watershed, Humboldt County, California. Poster presentation at the American Geophysical Union Meeting. December 2008. San Francisco, California.

Royer\*, C.F., **A.P. Stubblefield**. Spatial Analysis of Chinook Spawning Habitat: GIS Analysis of Warm Water Intrusion Below Iron Gate Dam; Klamath, California. Poster presentation at the American Geophysical Union Meeting. December 2007. San Francisco, California.

**Stubblefield, A.P.**, P.J. Whiting, G. Matisoff, C. Fondran, and M. Ketterer. Sediment budget for Murder Creek, Georgia, USA, from  $\text{Pu}^{239+240}$ -determined soil erosion rates. Oral presentation at the American Geophysical Union Meeting. December 2005. San Francisco, California.

P. Miller, K.G. Karthikeyan, J. Grande, P. Gaebler, S. McClure, P. Whiting, **A.P. Stubblefield**, and G. Matisoff. Evaluation of Sediment Transport Mechanics Using Lanthanide Tracers and Radiometric Fingerprinting. Oral Presentation at American Society of Agronomy - Crop Science Society of America - Soil Science Society of America - International Annual Meetings. November 2005. Salt Lake City, Utah.

**Stubblefield, A.P.**, P.J. Whiting, G. Matisoff, C. Fondran, and M. Ketterer. Fine-scale temporal resolution of sediment source by Be-7. Poster presentation at the American Geophysical Union Meeting. May 2005. New Orleans, Louisiana.

**Stubblefield, A.P.** Watershed Assessment at Lake Tahoe: Methods for Measuring Sedimentation and Sediment Source. Oral Presentation to the Geology Colloquium at Bowling Green State University. October 2004. Bowling Green, Ohio.

**Stubblefield, A.P.** Watershed Management at Lake Tahoe. Oral presentation to the Cleveland Geological Society. February 2004. Cleveland, Ohio.

**Stubblefield, A.P.**, J.E. Reuter, and C.R. Goldman. Measurement of physical parameters for assessment of salmonid habitat quality in gravel-bed streams, Lake Tahoe, CA-NV, USA. Oral presentation at

the American Fisheries Society-California Chapter Meeting. April 2002. Tahoe City, California.

**Stubblefield, A.P.**, J.E. Reuter, and C.R. Goldman. Sediment Sources in Lake Tahoe Watersheds. Oral presentation at the American Geophysical Union Meeting. December 2001. San Francisco, California.

**Stubblefield, A.P.**, J.E. Reuter, and C.R. Goldman. Temporal and spatial dynamics of sediment loading at Ward Creek, Lake Tahoe, California. Poster presentation at the American Geophysical Union Meeting. December 1999. San Francisco, California.

**Stubblefield, A.P.**, J.E. Reuter, and C.R. Goldman. Sediment sources in Lake Tahoe Watersheds. Oral presentation at the National Association of Lake Managers Meeting. December 1999. Reno, Nevada.

**Stubblefield, A.P.**, J.E. Reuter, and C.R. Goldman. Use of infrared turbidometers for watershed analysis, Lake Tahoe Basin. Poster presentation at the Ecological Health Conference of the Society for Ecosystem Health. August 1999. Sacramento, California.

**Stubblefield, A.P.**, J.E. Reuter, and C.R. Goldman. Stream bank erosion: a fifteen-year perspective, Lake Tahoe, California. Poster presentation at the Ecological Society of America/American Society of Limnology and Oceanography combined meeting. Spring 1998. St. Louis, Missouri.

Shepherd, H.L., M.E. Grismer, **A.P. Stubblefield**, and J.W. Hopmans. Use of constructed wetlands for treatment of winery waste. Poster presentation at the American Geophysical Union 1997 Fall Meeting. San Francisco, California.

#### FELLOWSHIPS, AWARDS, GRANTS

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California Department of Forestry and Fire Protection. Railroad Gulch Best Management Practices Evaluation Project- Cooperative Instream Monitoring Project. 2015-2019. \$126,885.

Trione Graduate Scholarship Faculty Honoree Award. Spring 2014. \$30,000 salary plus \$32,000 in tuition to support a graduate student under my supervision.

Outstanding Faculty Award. 2014-2015. An award given by the students of the Department of Forestry and Wildland Sciences, Humboldt State University, in recognition of outstanding

instruction, dedication to student's educational development and enthusiasm in the classroom.

U.S. Department of Agriculture, National Institute of Food and Agriculture, Hispanic-Serving Institutions Education Grants Program. PI with Co-Pi: E. Kelly, E. Vasquez, J. Kane. CAMBIO: Adapting to a changing student demographic with experiential learning and research opportunities related to forests, rangelands, and watersheds. 2015-2019. \$998,084.

Humboldt Redwoods Company, LLC. Monitoring In-Stream Effectiveness and Implementation of a Timber Harvest Plan in Railroad Gulch, Elk River, California. 2014-2017. \$60,000.

McIntire Stennis Program. Cooperative State Research, Education and Extension Service. United States Department of Agriculture. Sole PI. Water for Streams: Investigating the Potential for Forest Thinning to Augment Summer Flows in Northern California Watersheds. 2014-2017. \$100,000.

L.W Schatz Demonstration Tree Farm. Sole PI. Water for Streams: Investigating the Potential for Forest Thinning to Augment Summer Flows in Northern California Watersheds. 2014-2017. \$88,352.

Water Resources Policy Institute. Faculty Research Incentive Award. Spring 2013. \$6,756.

McIntire Stennis Program. Cooperative State Research, Education and Extension Service. United States Department of Agriculture. Sole PI. Optimizing forest management for stream thermal protection under climate change: insights into radiative and hydrologic processes. 2011-2012. \$56,714.

Tahoe Environmental Improvement Program. United States Forest Service. Co-PI with A. O'Dowd, C. Praul. Indices of Biotic Integrity. 2011-2012. \$112,000.

California Regional Water Quality Control Board Water Board. Sole PI. Development of a Water Quality Monitoring Database for the Klamath River Basin. 2010-2012. \$27,666.

National Center for Atmospheric Research Junior Faculty Forum on Climate Change and Water Resources Travel Grant. 2010. \$1100.

Proposal for UC/CSU Collaboration. University of California. Studying continuous cover management of coast redwood. Collaborating Investigator with J.P. Berrill. 2010. \$10,000.

Higher Education Multicultural Scholars Program. United States Department of Agriculture. National Institute of Food and Agriculture. Humboldt State University Multicultural Scholars. Co-PI with S. Marshall, H. Sup-Han, J. Varner. The Humboldt Wildland Scholars Award brought financial support to train underrepresented students in natural resources fields. 2008-2012. \$250,000.

McCrone Promising Faculty Scholar Award. Humboldt State University. 2009. \$1500.

Tahoe Environmental Improvement Program. USFS. Co-PI with J. Varner, E. Knapp. Developing burning prescriptions for balancing fuel reduction, soil exposure, and potential for erosion in the Tahoe Basin. 2008-2011. \$262,000.

McIntire Stennis Program. Cooperative State Research, Education and Extension Service. United States Department of Agriculture. Sole PI. Evaluation of impacts of timber harvest Best Management Practices on fine sediment loading and salmonid habitat use, Freshwater Creek, California. 2007-2010. \$54,000.

EPA Region 9/North Coast Regional Water Quality Control Board. Co-PI with S. Steinberg. Developing a coordinated monitoring plan for water quality of the Klamath Basin. 2007-2010. \$275,000.

Green Diamond Resource Company. Sole PI. Instrumentation of Experimental Watersheds: Little River, Ryan Creek, AhPah Creek, Winchuk Creek, California. 2006-2013. \$86,000.

Institute for Sustainable Forestry. Sole PI. Sapflow Measurements of Forest Water Use in the Mattole River. 2007-2008. \$9,500.

Humboldt Redwoods Company. Sole PI. Erosion assessment of McReady Gulch. 2007. \$9,600.

California Tahoe Conservancy. Co-PI with E. Larsen. Sediment and Nutrient Deposition in Relation to Hydrologic Regime, Truckee Marsh, South Lake Tahoe, California. 2002-2003. \$55,000.

California Water Resources Control Board. Co-PI with J. Reuter. Sediment Sources in Ward and Blackwood Creeks, Development of TMDL Work Products. 2001. \$64,000.

University of California, Davis. US EPA Center for Ecological Health Research Fellowship. Fall 1997 to June 2001.

Achievement Reward For College Scientists Foundation Fellow. Spring 2000. \$5,000.

Professors for the Future Fellow. UC Davis Graduate Studies. 2000-2001. \$3,000.

University of Michigan, School of Natural Resources and Environment. Research Fellowship. 1992-1993.

## RESEARCH AND TEACHING POSITIONS

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### *Research Positions*

Co-Director, Klamath Watershed Institute, Humboldt State University. The mission of the institute is to promote the use of HSU research capacity to assist in the natural resource management needs of the Klamath River Basin. 2007 - 2012.

Research Associate. Case Western Reserve University. Department of Geological Sciences. Cleveland, Ohio. Research on the use of fallout radionuclides as tracers of soil erosion and deposition. Supervision of radiochemistry lab, gamma spectrometry. Training in inductively coupled plasma spectrometry and fine-scale laser topographic measurements. 2003 to 2006.

Postdoctoral Researcher. University of California, Davis. Department of Geology. Research on interactions of fluvial geomorphology and sediment and nutrient fluxes on the Truckee Marsh, South Lake Tahoe, California. 2002-2003.

Primary Investigator. Tahoe-Baikal Institute. Selenge River Expedition, Mongolia. Led one-month expedition to investigate impacts of hydraulic gold-mining on Mongolian reaches of the Selenga River, tributary to Lake Baikal. Coordinated 13-member team of Mongolian, Russian and American scientists. Summer 2001.

Chemist. U.C. Davis. Department of Hydrology. Research on Constructed Wetlands, California. Conducted water chemistry analysis to determine treatment efficiencies of constructed wetlands for remediation of winery waste. Summer 1996.

Chemist. U.C. Davis Castle Lake Limnology Lab, Castle Lake, Shasta County, California. Conducted chemical and physical assays for long term monitoring of aquatic ecosystem health. Summer 1995.

Field Biologist. Michigan Biological Station. Assisted with nest finding and nest monitoring for neotropical migrant demographic study. Spring 1995.

Field Biologist. Corcovado National Park, Costa Rica. Helped design ecosystem-level study of effects of land crab burrows on nutrient cycling in lowland tropical rainforest. Summer 1994.

Forester. Michigan Impact Monitoring System, MI. Helped establish state-wide forest health monitoring system. Summer 1993.

Field Biologist. Point Reyes Bird Observatory. Farallon Islands, California. Participated in long term demographic studies of seabird populations and Northern Elephant Seals in response to ENSO cycle. Spring 1991. Winter 1992.

### *Teaching Positions*

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Associate Professor. Department of Forestry and Wildland Resources, Humboldt State University. 2012-present. Same courses as below.

Assistant Professor. Department of Forestry and Wildland Resources, Humboldt State University. 2006-2012. Courses taught include: WSHD 310 Wildland Hydrology and Watershed Management, WSHD 424 Watershed Hydrology, WSHD 458 Land Use and Climate Change, WSHD 333 Wildland Water Quality, WSHD 425 Forest Hydrology Capstone.

Adjunct Instructor. GEO 202 Global Environmental Problems. Case Western Reserve University. Course gave earth system science approach to environmental issues. Small group modeling project with Stella software. Fall 2004.

Consultant. Teaching Resources Center. University of California, Davis. Led workshops on active learning and teaching strategies for Teaching Assistants. Conducted classroom observations and evaluations. 2000-2001 Academic Year.

Lecturer. "Environmental Chemistry 1B." American River College. Los Rios Community College District. Taught a module on the Antarctic ozone hole. Used ozone chemistry to teach kinetics. Spring 2000.

Teaching Assistant (TA) or Instructor (I) positions:

TA. "Limnology." U.C. Davis. Spring 1996 and 1997.

TA. "Water Pollution." U.C. Davis. Winter 1996.

I. "Limnology Lab." U.C. Davis. Spring 1998.

I. "Biology of Running Waters Lab." U.C. Davis. Fall 1995.  
TA. "Biology and Management of Insects." University of Michigan.  
Winter 1994.

Cultural Orientation Instructor. Panat Nikom Refugee Processing Center, Thailand. Prepared groups of Lao, Khmer, and hilltribe refugees for resettlement in America. Year of 1988.

## GRADUATE PROGRAM

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*Major Advisor for M.S. Natural Resources in Forest, Watershed and Wildland Science Theses:*

Rodriguez, D. Persistence of stream restoration with large wood, Redwood National and State Parks, California. Spring 2018.

Medel, I. Sedimentation and erosion patterns within anabranching channels in a lowland river restoration project. Fall 2017.

Reddy, K. An examination of water consumption during and after severe drought in coastal stands of Douglas-fir in the Pacific northwest Fall 2017.

Wick, A. Adaptive Management of a Riparian Zone in the Lower Klamath River Basin, Northern California: The Effects of Riparian Harvest on Canopy Closure, Water Temperatures and Baseflow. Summer 2016.

Melosh, C. Modeling runoff levels over impervious surfaces in the Lake Tahoe basin using varying data resolution. Fall 2015.

Queener, N. Spatial and temporal variability in baseflow and stream drying in the Mattole River headwaters. Fall 2015.

Bond, L. Using distributed temperature sensing fiber-optics and Heat Source modeling to characterize a northern California stream's thermal regime. Fall 2013.

Harrison, N. Understanding the effects of soil exposure in fuels treatments that balance fuel reduction and erosion control in the Tahoe Basin. Fall 2012.

Huggett, B. Stream discharge modeling with the Distributed Hydrology Soil Vegetation Model (DHSVM) in a small, timber

Parker, T. Fluorometry as a bacterial source tracking tool in coastal watersheds, Trinidad, California. Spring 2011.

Royer, C. Building a foundation for coordinated water quality monitoring in the Klamath River Basin. Summer 2011.

Maurin, L. First year erosion responses following stream channel crossing fill removal in Redwood National and State Parks, Northwestern California. Summer 2008.

*Graduate students in progress:*

R. Dana, A. Sanchez, D. Jones, C. Faubion

*Thesis committee member:*

E. Santos (in progress), T. Hyles (completed), K. Bromley (completed), G. Bousfield (completed), R. Coltrin (completed), J. Harrison (completed), M. Kaufmann (completed), J. Kaufman (completed), B. Lee (completed), J. Hayes (completed).

#### PROFESSIONAL MEMBERSHIPS

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American Water Resources Association, Member, Faculty Advisor to Student Chapter.

American Geophysical Union, Member.

Xi Sigma Phi National Forestry Honor Society, Member, Faculty Advisor to Humboldt Chapter.

#### SCIENTIFIC REVIEWING

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*Biogeosciences*

*California Water Resources Control Board.*

*Canada Foundation*

*Computational Science and Discovery*

*Earth Surface Processes and Landforms*

*Energies*

*Environmental Management*

*Environmental Research Letters*

*Hydrologic Processes*

*International Journal of Environmental Research and Public Health*

*Journal of Environmental Quality*

*Journal of Geophysical Research*

*Journal of Physics and Chemistry of the Earth*

*Journal of Soil and Water Conservation*

*Journal of the American Water Resources Association*

*Measurement Science and Technology*

*New York Sea Grant*

*Science of the Total Environment*

*Water Resources Management*

*California Agriculture*

*Sustainability Science*

*Water*