

## Stephanie Moret, PhD

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### ***Educational History:***

Ph.D., Environmental Sciences: Water Resources Hydrology Track, Oregon State University, 2001.

M.S., Geology, Water Resources Hydrology minor, Oregon State University, 1997.

B.S., Geology, University of California at Davis, 1994.

### ***Employment History:***

#### *Current*

**Continuing Lecturer**, Environmental Studies Program

University of California Santa Barbara, Santa Barbara, CA

January 2015 to Present (Lecturer, followed by Continuing Lecturer)

#### *Historical*

#### **Education Contractor**

Sabbatical Replacement Lecturer at Bren School, UCSB 1/2012 – 3/2012

Developed an online education program for Forester Media 12/2010 – 3/2011

**Private Consultant** on water-related projects (various; 2000–ongoing)

**Regional Coordinator** for the Southern California Wetlands Recovery Project, California Bight  
10/2007–12/2008

**Assistant Professor** (tenure-track)

Department of Environmental Science, Louisiana State University, Baton Rouge, LA

10/2004 –8/2006

**Adjunct Assistant Professor** 9/2006–5/2007

**Courtesy Assistant Professor**

Civil, Construction & Environmental Engineering Department, Oregon State University, Corvallis, OR

9/2001–9/2004

**Water Resources Specialist**

City of Bainbridge Island, Washington

6/2002–9/2004

**Senior Environmental Scientist, Engineer 5**, Montgomery Watson Harza, Portland, Oregon

10/2001–6/2002

**Faculty Researcher**

Center for Water and Environmental Sustainability (CWEST), Oregon State University, Corvallis,

Oregon (Administrative Staff 9/97 to 3/98)

4/1998–9/2001

**Doctoral Graduate Researcher**

Hydrology and Environmental Sciences, Oregon State University, Corvallis, OR  
9/1994–5/2001

**Graduate Teaching Assistant**

Department of Geosciences, Oregon State University, Corvallis, OR 9/1994–6/1997

**Research Technician**

Department of Geology, UC Davis, Davis, CA 4/1992–5/1994

**Staff Research Associate III** (electron microscopy lab manager)

Engineering Division, UC San Diego, La Jolla, CA 10/1988–1/1992

**Research Technician**

Department of Biology, San Diego State University, San Diego, CA 11/1986–10/1988

**Teaching**

Classes

Course Number/ID	Title	Year(s) taught	Credits	Enrollment
ENVS 2 (UCSB)	Environmental Science	2015 to 2023	4	Winter 490 Summer 65
ENVS 2 Honors (UCSB)	Environmental Science Honors	2016 to 2023	1	30
ENVS 137 ENVS 193CP (UCSB)	Conservation Planning	2016–2024 (except 2018)	3	45
ENVS 144/GEOG 144 (UCSB)	Rivers	2015, 2018, 2023	4	48
ESM 215 (UCSB)	Landscape Ecology	2012	4	45
ENVS 7050 (LSU)	Spatial Modeling of Environmental Data	2005 and 2006	4	15
ENVS 7385 (LSU)	Decision Theory and Environmental Risk Analysis	2006	3	15

*Advising*

Level	Student	University	Thesis / Project Title	Year Completed
<b>Master's degrees</b>	Jessica Rury	LSU	Links between environmental mercury, special education, and autism in Louisiana	2006
	Melissa Kroninger	LSU	Spatial distribution of anthropogenic environmental hazards in the Louisiana coastal zone: implications for ecosystem restoration	2006
	Young Seok Yang	LSU	Using LiDAR for Modeling Levee Height: A Case Study in New Orleans, Louisiana	2006
<b>Graduate Committees</b>				
<b>Graduate Committees</b>	Student	University	Department	Year (s)
	Shadia Duery	LSU	Joint Environmental Science & Forestry Stakeholders working in partnership to reform the forest law and the forest product sector in Bolivia	2006
	Dan Farrah	LSU	Landscape Ecology	2005
	Lynette Overholser	LSU	Joint Environmental Science & Landscape Architecture	2005-6
	Hannon Didier	LSU	Environmental Science	2005-6
	Raquel Douglas	LSU	Environmental Science	2005-6
John Cross	LSU	Environmental Science	2005-6	
<b>Honors Projects and Undergraduate Projects*</b>				
<b>Honors Projects and Undergraduate Projects*</b>	Student	University	Project Title	Year (s)
	Elise Lyon*	UCSB	Engaging Creek Stewardship and Creek Signage in Goleta, CA	2024
	Annie Lee	UCSB	Data Visualization for Santa Barbara Housing Element development plans	2024
	Rachel Brody	UCSB	Data Visualization for Hidden Valley Open Space in Santa Barbara, CA	2024
	Katie Cheslick	UCSB	Santa Barbara Conservation Efforts and Student Opportunities	2022
	Tuan Le	UCSB	Ecological Restoration: History, Core Ideas, and Relation to Traditional Ecological Knowledge	2022
	Bowin de Barros*	UCSB	UCSB Greenhouse and Garden Project Pond Restoration and Outdoor Classroom Renovation	2019
Mackenzie Forgey	UCSB	Santa Barbara Conservation Blueprint	2016	

**Publications**

Moret, S.L. 2010. Southwestern Water—The Flows That Bind Us. 2010. In *Discovering a Sense of Place*. Northwest Earth Institute. Portland, OR.

Moret, S.L., W.T. Langford, B.T., D. D. Margineantu. Learning to Predict Channel Stability using Biogeomorphic Features. *Ecological Modelling*, 2006.

Barkhurst, M. and S. L. Moret. 1996. Post-Flood Assessment of Woody Debris in Oak Creek. Proceedings 2nd Annual Pacific Northwest Water Issues Conference, Portland, Oregon, October 7-8, 1996. American Institute of Hydrologists.

Burns, P.C., Hawthorne, F.C., Hofmeister, A.M., S. L. Moret. 1996. A structural phase-transition in  $K(\text{Mg}_{1-x}\text{Cu}_x)\text{F}_3$  perovskite. *Phys Chem Minerals* 23, 141–150 (1996).

Williamson, K. J., et al. 1995. Gravel Disturbance Impacts on Salmon Habitat and Stream Health. Volume II: Technical Background Report. Oregon Division of State Lands.

### ***Presentations***

- Fall 2005-S06 Presentations on Hurricane Katrina levee failures and social failures in New Orleans. Tulane University, Oregon State University, and University of Washington.
- Fall 2004 'Learning to Predict Channel Stability using Biogeomorphic Features,' Joint conference of The Fourth European Conference on Ecological Modelling and The Fourth International Workshop on Environmental Applications of Machine Learning, September 27 - October 1, 2004, Bled, Slovenia
- Fall 2003 'The Utility of Spatial and Temporal Scales in Riverine Studies' and 'Willamette River Alternate Futures'. American Water Resources Association, San Diego, CA Nov 2003
- Fall 2003 'Using Machine Learning Techniques to Model Geomorphic Processes'. Geologic Society of America, Seattle, WA, Nov 2003
- Summer 2001 'Utilizing a Cost Analysis Prediction Model to Weigh Natural Resource Models'. American Water Resources Association, Decision Support Systems conference, Snowbird, Utah, June 30, 2001.
- Spring 2001 'Drought: Impacts and Issues'. Eastern Kentucky University, Richland, KY, May 11, 2001
- Spring 2001 'Basin Planning: Ideals and Illusions'. Willamette River Watershed Conference, Vancouver, WA, April 11 and 12, 2001
- Spring 2001 'Predicting Rapid Assessment Protocols Using Machine Learning Techniques', UC California Riverside, Riverside, CA, April 12, 2001

### ***Seminars and Workshops (designed, coordinated, and/or facilitated)***

2008 Southern California Wetlands Recovery Project Bi-Annual Wetlands Conference  
– Lead Organizer  
Floodplain Manager's Association Conference – Session Organizer  
H<sub>2</sub>O –Headlands to Ocean Conference – Co-Organizer

1997-2007 Variety of education and outreach programs relating to water resources protection including natural landscaping alternatives to toxins, well and septic health, bioswales, water and

shoreline conservation workshops, and water quality monitoring, including:

- Spring 2004 ‘Water and Watersheds’, Environmental Conference, Bainbridge Island, WA
- Fall 2003 ‘Salmon Homecoming’ event. Tours, lectures, and activities to celebrate salmon. Bainbridge Island, WA
- Fall 2002 ‘Low Impact Development’ workshop, Co-developed with Puget Sound Water Quality Action Team. Port Townsend, WA November 2002.
- Fall 2000 ‘Wetlands’, Water Resources fall quarter series. Oregon State University, Corvallis, OR
- Summer 2000 ‘Proper Functioning Condition’ Riparian Workshop, coordinated for National PFC Team, Corvallis, OR
- Fall 1999 ‘Water in the West: The Challenge for the Next Century’. Water Resources fall quarter series. Oregon State University, Corvallis, OR,
- Spring 1999 ‘Sustainability and the Land Grant University’. Included ‘The Natural Step’ workshop, Oregon State University, Corvallis, OR
- Spring 1999 ‘The Willamette River Basin: Population, Progress and Protection in the 21<sup>st</sup> Century’, Oregon State University, Corvallis, OR
- Spring 1999 ‘Crossing Boundaries: Linking People, Policy and Science’, Oregon State University, Corvallis, OR
- Winter 1999 ‘Conservation Riparian Enhancement Program (CREP)’ Workshop, Oregon State University, Corvallis, OR
- Fall 1998 ‘Eastern Oregon Water Issues: Past Problems, Current and Future Solutions’. Water Resources fall quarter series. Oregon State University, Corvallis, OR,
- Fall 1997 ‘Learning from Failure: Columbia River Salmon Restoration’. Water Resources fall quarter series. Oregon State University, Corvallis, OR,

### ***Professional and Community Service***

2015 – ongoing: University of California Santa Barbara

Instructional Development Presentations: F2023 Engaging Teaching Symposium – Reflection Exercises to Engage Students. M 2018 -How to be successful at teaching on-line classes.

Greenhouse Garden Project (GHGP): Environmental Science Honors Project Gardens 2015-2018 to provide food for the student community. Led Environmental Science field trips twice a year where students write field notes and reflections. Supervised a senior special project restoring the GHGP pond for aquaculture and rehabilitating the outdoor classroom.

Students: Annually compose and submit a several Letters of Recommendations (I teach over 600 students a year), mentor graduate student Teaching Assistants (about 8 to 9 a year) and supervise both special projects and honors projects.

Invited Guest Speaker: Spring 2018 CCBER Conservation and Restoration Ecology Seminar. “Local soils and geology: History and function vis a vis hydrology and plant communities” - joint talk with Dr. Derek Booth (Bren School)

2023 – ongoing: CO2 Foundation, Science Advisor and Trustee (since 2024)

2023 – ongoing: Creeks Advisory Committee, City of Santa Barbara

2022 – ongoing: Santa Barbara Urban Creeks Council Board Member

2013-2015: CASA—Court Appointed Special Advocate; *Guardian ad Litem*

1990-2009 Multiple Engagements:

- Invited paper editor for the Journal of Soil and Water
- Grant reviewer for King County, WA water quality grants
- Science advisor, coordinator, instructor, and judge for multiple K-8 school and regional science programs and fairs, including joining the 2003 Discovery Channel National Science Fair winner on his 'week with scientists'
- Initiated 'Green Drinks' gatherings for environmental professionals in both the Tacoma and the Seattle Metro areas
- Riparian session co-chair for American Institute of Hydrology 2002 national meeting
- Co-designed the 'Water Availability Policy Forum' for Willamette Valley Council of Governments
- Hydrologic advisor on proposed channel restoration design aimed to flush 3,200 acres of wetland and off-habitat on Sauvie Island (Sturgeon Lake) on the Columbia River
- Representative, Water Resources Inventory Area (WRIA) 15 Regional Planning, Salmon Recovery Funding Board, Washington States
- Representative, Puget Sound Action Team
- Partner, ENVVEST TMDL planning
- Partner in Salmon Recovery with the Suquamish Tribe
- Member, The Natural Landscapes Project, WaterPAK Conservation, and the Bainbridge Island Environmental Roundtable
- Coordinator, Bainbridge Island Watershed Council 2002-2004

***Selected Relevant Projects***

2007/2009 Provided engineering geology advising to US Forest Service to alleviate take of the ESA-listed unarmored three-spined stickleback in the headwaters of the Santa Clara River. While working for SCWRP (Southern California Wetlands Recovery Project); provided support to develop projects for submission and shepherd them through the process. Typically, ~75 SCWRP projects are active per year that require \$40–50 M per year to implement.

2004/06 Jointly worked on a variety of projects related to Hurricane Katrina, including risk perception and disaster preparedness, predicting outbreaks of West Nile Virus, a toxins inventory of flooded parishes, planning and management related to rebuilding New Orleans, and design of a disaster sciences management model. Active in multiple working groups embracing interdisciplinary and multiagency teams.

2003/04 Developed Water Quality Monitoring Program for Bainbridge Island, Puget Sound, Washington State, incorporating volunteer work into the program strategy. Applied for and received state funding to implement program in 2005.

2003/04 Manitou Beach Salt Marsh Project. Coordinated community effort to purchase shoreline to reclaim and restore historic salt marsh in an effort to facilitate creation of salmon habitat and to open an isolated watershed to the Puget Sound. Wrote RFP for hydrologic and wetland study, secured funding for and facilitated consultant selection process to conduct feasibility study and design. Facilitated community outreach.

2003/04 Cooper Creek Restoration Project. Secured funding for and coordinating effort to build fish passage project on Cooper Creek, Bainbridge Island, WA. Project completed summer 2004.

2003 Issei Creek Restoration Project. Co-coordinated city effort to build fish ladder and passage on Issei Creek, Bainbridge Island, WA to restore salmon migration to watershed. Salmon spawned in Fall 2003.

2002/04 Puget Sound Salmonid Research. Joint project between the Suquamish Tribe and The City of Bainbridge Island to protect ESA listed species. Conducted bimonthly beach seines around the island perimeter via boat. Data revealed that several stages of juvenile salmonids utilized the shoreline for about two years, rather than remain in creeks and rivers before leaving for open water. Presented findings and altered federal access to salmonid funding to include prioritizing shoreline protection.

2002 Oroville Facilities Relicensing Project. Conducted studies on the effects of project operations on geomorphic processes both upstream and downstream of Oroville Dam, project effects on riparian resources, wetlands, and associated floodplains, and reviewed recreational use.

2002 Managed tasks for FERC relicensing project analyzing Baker River Hydroelectric Project operations impacts upon anadromous fish migration, WA. Comprehensive statistical analyses included both project operation and meteorology data as indicators of fish abundance.

2001 Managed project aimed at restoring natural hydrologic function to the Sandy River Delta/Columbia River Slough-Island. Project included hydrology, geomorphology, landscape ecology, and fishery analyses of the Lower Sandy River and the Columbia River near the delta, spanning several temporal and spatial scales. Several restoration scenarios were proposed and analyzed in the context of channel migration and scour impacts to the physical and biological environments and to anthropomorphic features such as bridges and gravel mining operations.

2001 Provided study design planning for two studies in support of Oroville Dam Federal Energy Regulatory Commission (FERC) relicensing. Studies included evaluation of project effects on non-fish aquatic resources (e.g., macroinvertebrates), and evaluating project effects on tributary fish interactions.

2001 Provided assessment for four alternative descriptions and impacts for the Coleman National Fish Hatchery Management Alternatives Analysis. Provided detailed hydrologic investigation of all water use related to the hatchery, stream, wetlands, and adjacent agricultural use. Identified various opportunities and limitations for recycling water, disconnecting the hatchery from a neighboring river, and separating natural native fish from hatchery fish.

### ***Professional Licenses***

Professional Geologist: 5/2002. State of Washington, License # 854; current  
Licensed Engineering Geologist: 5/2002. State of Washington, License # 854; current

### ***Continuing Education***

Non-profit Board Development Leadership, 2023-ongoing  
Conservation Coaching 2019  
Instructional Development. Many workshops: OSU, LSU, UCSB  
Workshops: Mediation, Conflict Resolution, Negotiation, Effective Listening, Facilitation, Consensus Building, DEIJ, Social Marketing for Natural Resources, Community Development