

Margaret Zimmer
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PROFESSIONAL PREPARATION

Oberlin College	Oberlin, OH	BA, Environmental Studies	2011
Syracuse University	Syracuse, NY	MS, Earth Sciences	2013
Duke University	Durham, NC	PhD, Earth and Ocean Sciences	2017

APPOINTMENTS

Assistant Professor	UC Santa Cruz	Earth and Planetary Sciences	2018-present
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AWARDS/HONORS

Hellman Fellowship	Hellman Foundation		2020
Editor's Choice Award	Water Resources Research		2018
Graduate Research Fellow	National Science Foundation		2013-2017
Outstanding Student Presentation Award	American Geophysical Union Annual Meeting		2011, 2016

PROFESSIONAL ACTIVITIES

Steering Committee Member on NSF-funded Intermittent River Research Coordination Network. This network connects the global non-perennial river research community. I lead the assessment and integration of our global understanding of non-perennial rivers, and their connections to the water cycle.

Co-leader of Water Resource Innovation Partnership. I help lead a collaboration between University of California and Santa Clara Water District, which manages water resources for ~2M county residents. I lead the Surface Water-Groundwater Interactions Initiative to assess above and below ground water resources.

Leader of University of California Nature Reserve Fire Impact Assessment. I lead the hydrology team, which is one of four post-fire assessment teams responsible for studying ecosystem response at the 7 UC Nature Reserves that burned in the 2020 wildfire season.

Collaborator on California Heartbeat Initiative. I collaborate with other University of California researchers to implement a \$2M ecohydrological sensor network across the entire state of California to understand plant-water interactions. I lead the hydrologic research efforts at Blue Oak Ranch Reserve.

Co-leader of Multi-Year Stakeholder Workshop Series. In collaboration with NOAA Elkhorn Slough National Estuarine Research Reserve, I co-lead a multi-year workshop series targeted at engaging relevant stakeholders (e.g., farmers, water managers, researchers) on regional nitrate pollution issues.

AWARDS/GRANTS

Lead PI. RAPID: Collaborative Research: Hydrologically driven export of pyrogenic carbon and nutrients in fire-impacted watersheds. National Science Foundation. 11/1/20-10/31/21. \$67,513

Lead PI. Linking Nutrient Reactivity and Transport in Subsurface Flowpaths along a Terrestrial-Estuarine Continuum. Department of Energy. 9/1/2020 - 8/31/2023. \$599,939

Co-PI. Quantification of nutrient fate and transport in salt marsh pore water through the use of a high frequency sensor network and environmental tracers. National Oceanic and Atmospheric Administration. 9/1/2020- 8/31/2022. \$120,000

Lead PI. Assessment of water storage for management of California's oak woodlands. California Institute for Water Resources. 3/1/2019-2/28/2021. \$25,000

Lead PI. Training the next generation of environmental scientists in novel isotopic methods for groundwater age and nitrogen cycling. Department of Energy Lawrence Livermore National Laboratory. 7/1/2019-9/30/2019. \$15,000

Lead PI. Linking terrestrial pollution to estuarine water quality: Quantification of the role of groundwater in the transport, transformation, and removal of agricultural pollutants in Elkhorn Slough, CA. California SeaGrant. 12/1/2018-11/30/2021. \$250,000

Senior Personnel. Research Coordination Network: Integrating Intermittent River Ecology and Hydrology. National Science Foundation. 7/1/2018-6/30/2023. \$499,955

PUBLICATIONS *denotes postdoc, **graduate student, ***undergraduate student

16. Allen D, Datry T, Boersma K, Bogan M, Boulton AJ, Bruno D, **Busch M, Costigan K, Dodds WK, Fritz K, Godsey SE, Jones JE, Kaletova T, Kampf S, Mims MC, Neeson TM, Olden JD, Pastor AV, Poff NL, Ruddell BL, Ruhi A, Singer G, Vezza P, Ward AS, **Zimmer MA**. 2020. River ecosystem conceptual models and non-perennial rivers: A critical review. *Wiley Interdisciplinary Reviews: Water*. DOI: 10.1002/wat2.1473 (alphabetical author list).
15. Ledford SH, **Zimmer MA**, ***Payan D. 2020. Anthropogenic and biophysical controls on low flow hydrology in the southeastern US. *Water Res. Research*. DOI 10.1029/2020WR027098
14. **Busch MH, Costigan KH, Fritz KM, Datry T, Krabbenhoft C, Hammond JC, **Zimmer MA**, Olden JD, Burrows RM, Dodds WK, Boersma KS, Shanafield M, Kampf SK, Mims MC, Bogan MT, Ward AS, Rocha MP, Godsey SE, Allen GH, Blaszcak JR, Jones CN, Allen DC. 2020. What's in a name? Patterns, trends, and suggestions for defining non-perennial rivers and streams. *Water*. DOI: 10.3390/w12071980
13. **Zimmer M**, Kaiser K, Blaszcak J, Zipper S, Hammond J, Fritz K, Costigan K, Hosen J, Godsey S, Allen G, Kampf S, Burrows R, Krabbenhoft C, Dodds W, Hale R, Olden J, Shanafield M, DelVecchia A, Ward A, Mims M, Datry T, Bogan M, Boersma K, **Busch M, Jones C, Burgin A, Allen D. 2020. Zero or not? Causes and consequences of zero-flow stream gage readings. *Wiley Interdisciplinary Reviews: Water*. DOI: 10.1002/wat2.1436.
12. **Richardson CM, **Zimmer MA**, *Fackrell JK, Paytan A. 2020. Geologic controls on source water drive baseflow generation and carbon geochemistry: evidence of nonstationary baseflow sources across multiple subwatersheds. *Water Res. Research*. DOI: 10.1029/2019WR026577

11. **Zimmer MA**, Pellerin B, Burns D, Petrochenkov G. 2019. Temporal variability in nitrate-discharge relationships in large rivers as revealed by high frequency data. *Water Res. Research*. DOI: 10.1029/2018WR023478
10. ***Barefoot E, Pavelsky TM, **Allen GH, **Zimmer MA**, McGlynn BL. 2019. Temporally Variable Stream Width and Surface Area Distributions in a Headwater Catchment. *Water Res. Research*. DOI: 10.1029/2018WR023877
9. **Zimmer MA**, McGlynn BL. 2018. Lateral, vertical, and longitudinal source area connectivity drive runoff and carbon export across watershed scales. *Water Res. Research*. DOI: 10.1002/2017WR021718
8. **Zimmer MA**, Gannon JP. 2018. Runoff processes from mountains to foothills: the role of soil stratigraphy and structure in influencing runoff characteristics across high to low relief landscapes. *Hydrol. Process*. DOI: 10.1002/hyp.11488
7. **Zimmer MA**, McGlynn BL. 2017. Ephemeral streamflow generation in a low relief, highly weathered catchment. *Water Res. Research*. DOI: 10.1002/2016WR019742
6. **Zimmer MA**, McGlynn BL. 2017. Bidirectional stream-groundwater flow in response to temporary streamflow and seasonal groundwater dynamics. *Hyd Pr*. DOI: 10.1002/hyp.11301
5. **Zimmer MA**, McGlynn BL. 2017. Time-lapse animation of hillslope groundwater dynamics details event-based and seasonal bidirectional stream-groundwater gradients. *HPEye*. DOI: 10.1002/hyp.11124
4. **Zimmer MA**, Lautz LK. 2015. Pre- and post-restoration assessment of stream water-groundwater interactions: Effects on hydrological and chemical heterogeneity in the hyporheic zone. *Freshwater Science*. DOI: 10.1086/679514
3. Smidt SJ, Cullin JA, Ward AS, Robin J, **Zimmer MA**, Lautz LK, Endreny TA. 2015. A comparison of hyporheic transport at a cross-vane structure and natural riffle. *Groundwater*. DOI: 10.1111/gwat.12288
2. **Zimmer MA**, Lautz LK. 2014. Temporal and spatial response of hyporheic zone geochemistry to a storm event. *Hydrol. Process*. DOI: 10.1002/hyp.9778
1. **Zimmer MA**, Bailey SW, McGuire KJ, Bullen TD. 2013. Fine scale variations of surface water chemistry in an ephemeral to perennial drainage network. *Hyd Proces*. DOI:10.1002/hyp.9449