Galen Gorski

Department of Geography
University of California, Berkeley
509.869.2314 ggorski@ucsc.edu
galengorski.github.io

RESEARCH INTERESTS

Watershed hydrology; groundwater-surface water interactions; biogeochemical cycling; high-frequency water quality measurements; data science; water resource management; science communication

POSITIONS HELD

Postdoctoral Fellow *Current*
Department of Geography, University of California, Berkeley
Advisor: Laurel Larsen

Postdoctoral Researcher *2020*
Department of Earth and Planetary Science, University of California, Santa Cruz
Advisors: Andrew Fisher and Margaret Zimmer

NSF Graduate Research Intern *2018 - 2020*
USGS New Jersey Water Science Center
Advisor: Dan Goode

NSF Graduate Fellow *2016 - 2020*
Department of Earth and Planetary Science, University of California, Santa Cruz
Advisors: Andrew Fisher (Primary Advisor), Adina Paytan (Co-Advisor)

Biological Science Technician *2014 - 2015*
Department of Soil, Water, and Climate, University of Minnesota/USDA
Advisors: John Baker and Tim Griffis

Laboratory Technician *2013 - 2014*
Department of Geology and Geophysics, University of Utah
Advisor: Gabe Bowen

EDUCATION

University of California, Santa Cruz, Santa Cruz, CA *2020*
Department of Earth and Planetary Science
PhD Hydrogeology
Advisors: Andrew Fisher (Primary Advisor), Adina Paytan (Co-Advisor)

Carleton College, Northfield, MN *2013*
Department of Chemistry
BA

PUBLICATIONS *In Review:*

Gorski G., Fisher A.T., Beganskas S., Dailey H., Schmidt C. Mapping the potential for denitrification during infiltration with machine learning informed by field and laboratory experiments. *Proceedings of the National Academy of Sciences.*

Gorski G., Zimmer M.A. Hydrologic regimes drive nutrient export behavior in human impacted watersheds. *Hydrology and Earth System Science.*

Published:

Gorski G., Dailey H., Fisher A.T., Schrad N., Saltikov C. (2020) Denitrification during infiltration for managed aquifer recharge: Infiltration rate controls and microbial response. *Science of the Total Environment*, 727, 138642.
doi.org/10.1016/j.scitotenv.2020.138642

Balestra B., Orland I.J., Fessenden-Rahn J., **Gorski G.,** Franks R., Rahn T., Paytan A. (2020) Paired analyses of oxygen isotope and elemental ratios within individual shells of benthic foraminifera genus *Uvigerina*. *Chemical Geology*, 533, 119377.
doi.org/10.1016/j.chemgeo.2019.119377

Gorski G., Fisher A.T., Beganskas S., Weir W., Redford K., Schmidt C., Saltikov C. (2019) Field and laboratory studies linking hydrologic, geochemical, and microbiological processes and enhanced denitrification during infiltration for managed recharge. *Environmental Science and Technology*, 53, 9491-9501.
doi/10.1021/acs.est.9b01191

Beganskas S., **Gorski G.**,Weathers T., Fisher A.T., Schmidt C., Saltikov C.W., Redford K., Stoneburner B., Harmon R., Weir W. (2018) A horizontal permeable reactive barrier stimulates nitrate removal and shifts microbial ecology during rapid infiltration for managed recharge. *Water Research*, 144, 274-284.
doi.org/10.1016/j.watres.2018.07.039

Griffis T.J., Wood J.D., Baker J.M., Lee X., Xiao K., Chen Z., Welp L.R., Schultz N.M., **Gorski G.**, Chen M., Nieber J. (2016) Investigating the source, transport, and isotope composition of water vapor in the planetary boundary layer. *Atmospheric Chemistry and Physics Discussion*, 16, 5139-5157.
doi.org/10.5194/acp-16-5139-2016

Gorski G., Strong C., Good S.P., Bares R., Ehleringer J.R., Bowen G.J. (2015) Vapor hydrogen and oxygen isotopes reflect water of combustion in the urban atmosphere. *Proceedings of the National Academy of Sciences*, 112, 3247-3252.
dx.doi.org/10.1073/pnas.1424728112

In Prep:

Pensky J., **Gorski G.**, Fisher A.T., Schrad N., Dailey H., Saltikov C., Controls on water quality improvement during infiltration through coarse and carbon-poor soils: Implications for managed recharge. Target: *Science of the Total Environment.*

AWARDS AND FELLOWSHIPS

UCSC Aaron and Elizabeth Waters Award for best qualifying exam	*June 2018*
NSF Graduate Research Fellowship–3 years full funding	*March 2016*
UCSC Environmental Studies Hammett Graduate Fellowship	*March 2016*

MENTORING AND OUTREACH

Hidden Curriculum Graduate Level Course – Co-Organizer
In collaboration with a group of graduate students and a faculty mentor from the EPS department at UC Santa Cruz, I helped develop a graduate level course centered around the 'Hidden Curriculum' in geoscience graduate education. Through short readings, activities, and group discussions the course focused on aspects of graduate school that are often not addressed in a formal setting, but are still essential for successful development as a scientist, such as time management, research brand development, and mentoring.

Cultivamos Excelencia – Graduate Student Mentor
I served as a mentor for two community college students from San Jose City College interested in transferring to a four-year university. The program consisted of weekly meetings with the mentees, a year-long research project designed and conducted by the mentees, and an end-of-year research symposium.

Expand Your Horizons – Facilitator
An event for girls from Santa Cruz and Monterey County public schools, grades 5-10, to learn about earth science topics. I have helped facilitate activities on plate tectonics and ocean acidification.

Institute for Scientists and Engineer Educators Professional Development Program – Graduate Student Participant
A two-part workshop for early career scientists interested in education and teaching. The workshops focused on experiential learning and creating classroom environments inclusive to a diversity of identities and learning styles. I planned and executed a lesson plan for an Introductory Chemistry course on campus using techniques I had learned in the workshops.

GIS Workshop as part of NSF-GRIP internship
As part of the NSF Graduate Research Internship Program (GRIP) that I took part in, I led a GIS workshop with participants and stakeholders from Lebanon, Palestine, Jordan, Egypt, Cyprus, and the United States. The workshop was part of a larger collaborative meeting, and its goals were to help transfer skills and build capacity in our partnering countries as part of wider project goals centered on regional groundwater security and sustainability.

Community College Rise – Graduate Student Mentor
A program designed to give community college students research experience during the summer. I served as a mentor for Molly Cribari, a community college student, who performed lab work, analyzed water samples in our laboratory facilities, and delivered an oral presentation on her research topic at the end of the 10-week session.

COMPUTER SKILLS

Adobe Illustrator, ArcGIS, EddyPro, HYDRUS (Variably saturated hydrologic modeling), R, LaTeX, MatLab, MODFLOW, MySQL, Python, Surfer, SWAT (Soil Water Assessment Tool), UNIX shell scripting