

Galen Gorski

Earth and Planetary Sciences Department
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EDUCATION

University of California, Santa Cruz, Santa Cruz, CA
PhD Candidate Hydrogeology *Expected Date of Defense: Spring 2020*
Committee Members: Andrew Fisher (Primary Advisor), Adina Paytan, Noah Finnegan, Samuel Sandoval Solis

- Completed coursework includes: Introduction to Probability, Classical and Bayesian Inference, Applied Bayesian Modeling, and Groundwater Modeling

Carleton College, Northfield, MN
Bachelor of Arts in chemistry *June 2013*

- Extensive coursework in geology
- Senior thesis: *Probing the primary events in photosynthesis using ultra-fast lasers*

Current Research

My research combines field, laboratory and modeling techniques to investigate improvements to water quantity and quality with a particular emphasis on measuring and modeling biogeochemical cycling in groundwater surface-water interactions.

POSITIONS HELD

NSF Graduate Research Intern *Jan. 2018 - Current*
USGS advised by Daniel Goode, Lawrenceville, NJ

PhD Candidate and NSF-GRFP Fellow *Sept. 2015 - Current*
Hydrogeology Lab of Andrew Fisher, UC Santa Cruz, Santa Cruz, CA

Biological Science Technician *Nov. 2014 - July 2015*
Biometerology Lab of John Baker and Tim Griffis, USDA, Minneapolis, MN

Laboratory Technician *Oct. 2013 - July 2014*
Isotope Geochemistry Lab of Gabriel Bowen, University of Utah, Salt Lake City, UT

Research Assistant *June 2013 - Sept. 2013*
Physical Chemistry Lab of Will Hollingsworth, Carleton College, Northfield, MN

Research Assistant *June 2012 - Sept. 2012*
Materials Chemistry Lab of Steven Drew, Carleton College, Northfield, MN

PUBLICATIONS 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

Balestra B., Orland I.J., Fessenden-Rahn J., **Gorski G.**, Franks R., Rahn T., Paytan A. (2019) Paired analyses of oxygen isotope and elemental ratios within individual shells of benthic foraminifera genus *Uvigerina*. *Chemical Geology* (In Press)
doi.org/10.1016/j.chemgeo.2019.119377

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*
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 REVIEW/ PREPARATION

Gorski G., Dailey H., Fisher A.T., Schrad N., Saltikov C. (In Review) Denitrification during infiltration for managed aquifer recharge: Infiltration rate controls and microbial response. *Water Research*.

Gorski G., Fisher A.T., Beganskas S., Dailey H., Schmidt C. Mapping denitrification potential across working landscapes. *Proceedings of the National Academy of Sciences*. Target submission Feb 2020.

Gorski G., Zimmer M.A., Understanding complex patterns in nutrient export from agricultural watersheds through analysis of land use and concentration discharge relationship. *Water Resources Research*. Target submission March 2020.

AWARDS AND FELLOWSHIPS

UCSC Aaron and Elizabeth Waters Award for best qualifying exam	<i>June 2018</i>
NSF Graduate Research Fellowship–3 years full funding	<i>March 2016</i>
UCSC Environmental Studies Hammett Graduate Fellowship	<i>March 2016</i>
UCSC Additional First Year Fellowship	<i>March 2015</i>

SELECTED PRESENT- ATIONS

Gorski G., Dailey H., Fisher A.T., Coupling benefits to water quantity and quality through stormwater collection linked to managed recharge. *Oral presentation at the Biennial Symposium on Managed Aquifer Recharge* (San Diego, CA March 2018)

Gorski G., Beganskas S., Weir W., Redford K., Saltikov C., Fisher A.T., Linking field and laboratory studies to investigate enhanced nitrate removal using permeable reactive barrier technology during managed recharge *Oral presentation at the national meeting of the American Geophysical Union* (New Orleans, LA December 2017)

Gorski G., Beganskas S., Weir W., Fisher A.T., (2017) Linking field and laboratory studies to investigate enhanced nitrate removal using permeable reactive barrier technology. *Oral presentation at the Groundwater Resources Association of California Annual Meeting*. (October 2016)

Gorski G., Beganskas S., Weir W., Murray J., Saltikov C.W., Fisher A.T. (2016) Investigating conditions for denitrification during controlled MAR experiments using reactive barrier technology. *Oral presentation at the 9th Annual International Symposium on Managed Aquifer Recharge. (June 2016)*

**COMPUTER
SKILLS**

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