Hayley R. Corson-Dosch

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formerly Hayley A. Corson-Rikert

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EDUCATION

University of Wisconsin - Madison, Madison, Wisconsin
Master's of Science in Cartography and GIS, *expected* August 2020

Oregon State University, Corvallis, Oregon
Master's of Science in Water Resources Science, September 2014

Wesleyan University, Middletown, Connecticut
Bachelor of Arts in Earth & Environmental Sciences, May 2011

TECHNICAL SKILLS

Proficient in Python, R, Javascript, D3, jQuery, Leaflet, HTML, CSS, ArcGIS, Jupyter Notebooks, Git, GDAL, Adobe Illustrator, Adobe Photoshop, Mapbox, GPS data collection and processing, HOBOware, Aqua4Plus, and Microsoft Excel, Word, and Powerpoint

RELEVANT COURSEWORK

Graphic design in cartography, advanced geocomputing and geospatial big data analytics, interactive cartography and geovisualization, GIS and spatial analysis, introduction to geocomputing, advanced quantitative analysis, introduction to cartography, physical hydrology, aquatic chemistry, stream ecology, snow hydrology, water resources fluid mechanics, groundwater hydraulics, hydrologic modeling, hydrology seminar, data analysis I + II, proposal writing, GIS in water resources, global climate change, environmental geochemistry, marine biogeochemistry, geomorphology, introduction to GIS, earth materials

RELATED EXPERIENCE

Sept. 2019 – Present

Intern, Data Science Branch, U.S. Geological Survey, Middleton, Wisconsin

- Review existing stream temperature models to identify potential parameterization methods to account for shade effects in stream temperature modeling
- Write R scripts to automate repetitive processes, and aggregate, format, and visualize data
- Use the R packages GLMR and glmtools to configure and run GLM, a one-dimensional lake water balance and stratification model
- Contribute to GitHub repositories to maintain version control and to collaborate with colleagues

Oct. 2016 – August 2019

Environmental Scientist II, Tetra Tech, Portland, Oregon

- Conducted environmental monitoring, including sampling and documenting project actions
- Wrote sections for NEPA and CEQA documents on existing conditions of and potential impacts to water resources, hydrology, mineral resources, and geology and soils
- Acted as deputy and full project manager for technical reviews of environmental projects
- Synthesized and analyzed spatial data in ArcGIS and created high-quality figures for clients

June 2015 – Sept. 2016

Aquatic Scientist II, Tetra Tech, Seattle, Washington

- Collected water samples. Measured in situ levels of water quality parameters
- Assisted in surveys of aquatic macrophytes in lakes and reservoirs. Processed data in GIS
- Managed field and laboratory data for submission to client databases
- Analyzed water quality, hydrologic, and climatic data, and produced professional figures
- Wrote reports, technical memos, and executive summaries of monitoring results for clients

March 2013 – Sept. 2014

Carbon dynamics in the hyporheic zone of a headwater mountain stream in the Cascade Mountains, Oregon, M.S. thesis, Oregon State University

- Installed a transect of hillslope wells and maintained an existing network of hyporheic wells at H.J. Andrews Experimental Forest LTER
- Sampled and filtered water from shallow hyporheic wells monthly and during a storm event
- Measured pH, temperature and water level on-site, and measured alkalinity and concentrations of major anions, cations, DOC, and DIC in the IWW Collaboratory at Oregon State University
- Analyzed chemical data for temporal and spatial patterns in carbon processing

June – August 2012 **Carbon Assessment Intern**, Mountain Studies Institute, Durango, Colorado
- Conducted canopy vegetation surveys in the San Juan National Forest for the Forest Service
- Measured DBH and tree height, conducted vegetation surveys, and cored trees for CU Boulder carbon assessment and fire history research projects

July 2010 – April 2011 **Keck Geology Consortium Research Project**, B.A. thesis, Front Range, Colorado
- Participated in field research at the CU Boulder Mountain Research Station and Niwot LTER
- Collected samples for a gradient study of phosphorus cycling and distribution in upland soils
- Conducted laboratory analyses to measure phosphorus fractions in collected soil samples

REFERENCES

Steve Wondzell, U.S. Forest Service, master's advisor – steve.wondzell@usda.gov, 541-758-8753

David Munro, Tetra Tech (Portland), supervisor – david.munro@tetratech.com, 503-358-3021

Harry Gibbons, Tetra Tech (Seattle), supervisor – harry.gibbons@tetratech.com, 360-286-0921

PEER-REVIEWED PUBLICATIONS

Welch, E. B., H. L. Gibbons, S. K. Brattebo, and **H. A. Corson-Rikert** (2017), Progressive conversion of sediment mobile P to aluminum P, *Lake and Reservoir Management*, http://dx.doi.org/10.1080/10402381.2017.1292333.

Welch, E. B., H. L. Gibbons, S. K. Brattebo, and **H. A. Corson-Rikert** (2017), Distribution of aluminum and phosphorus fractions following alum treatments in a large shallow lake, *Lake and Reservoir Management*, http://dx.doi.org/10.1080/10402381.2016.1276653.

Corson-Rikert, H. A., S. M. Wondzell, R. Haggerty, and M. V. Santelmann (2016), Carbon dynamics in the hyporheic zone of a headwater mountain stream in the Cascade Mountains, Oregon, *Water Resources Research*, *52*, 7556–7576, doi: 10.1002/2016WR019303.

Argerich, A., R. Haggerty, S. L. Johnson, S. M. Wondzell, N. Dosch, **H. Corson-Rikert**, L. R. Ashkenas, R. Pennington, and C. K. Thomas (2016), Comprehensive multiyear carbon budget of a temperate headwater stream, *Journal of Geophysical Research: Biogeosciences*, *121*, doi:10.1002/2015JG003050.

Corson-Rikert, H., E. Kimball, H. Bourne, and T. Khanachet (2010), Chemical analyses of *Thalassia testudinum* - determining the environmental condition of Laguna Grande and the seven seas, Puerto Rico, *Acta Científica*, *24*(1-3), 3-13.

CERTIFICATIONS

Professional Certificate of Completion – Basic Wetland Delineation, Environmental Professional Program, Portland State University, Portland, Oregon, *March 2017*

AWARDS/ HONORS

1st place oral presentation, Water Resources Symposium, Oregon State University, *May 2014*
Provost's Distinguished Fellowship, Oregon State University, *Sept. 2012 - Sept. 2013*
Phi Beta Kappa, Connecticut Gamma Chapter, *May 2011*
Mary & John Sease Prize for Excellence in Environmental Science, Wesleyan University, *May 2011*
Departmental Honors in Earth and Environmental Science, Wesleyan University, *April 2011*
Dean's List, Wesleyan University, *Fall 2010, Spring 2011*

OTHER EXPERIENCE

Sept. 2013 – June 2014 **Graduate Teaching Assistant**, Oregon State University, Corvallis, Oregon
- Provided feedback to students on writing submissions and graded course assignments and exams for undergraduate geography, policy, and geology courses

Sept. 2010 – May 2011 **Senior Seminar Capstone Research Project**, Wesleyan University, conducted in Puerto Rico
- Proposed and implemented a research project utilizing nutrient concentrations in seagrasses as an in situ indicator of ecosystem health within two marine ecosystems in Puerto Rico
- Measured TOC and TON, analyzed and presented results, and published a peer-reviewed article

LEADERSHIP ROLES

Co-captain, Wesleyan Women's Ultimate Frisbee team, *2010-2011*
Co-president, Wesleyan Outing Club, *2010-2011*

LANGUAGES

Proficient in written and oral Spanish