

# Hailey Sauer

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Educator, Scientist, and Mentor with a strong passion for making the world a greener and better place. Experienced Teacher and Environmental Scientist with a drive for creatively and effectively communicating quantitative and spatial information. Strategic thinker with high attention to detail. Process-oriented and able to network and collaborate colleagues. Effective communicator across varying levels and languages in one-on-one, small group and large audiences.

## EDUCATION

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<b>University of Minnesota - Ph.D.</b> <i>Plant and Microbial Biology</i>	Expected Spring 2023
<b>University of Wisconsin River Falls - B.S.</b> <i>Environmental Science &amp; Geographic Information Science</i>	2018
<b>University of Wisconsin Oshkosh - B.S.</b> <i>K-12 Education &amp; Spanish</i>	2013

## RESEARCH INTERESTS

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Investigations on the impacts of microbial communities in biogeochemical cycling in lakes.

## APPOINTMENTS

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<b>Graduate Research Assistant</b> <i>University of MN - Plant &amp; Microbial Biology</i>	2019 - Present
<b>Environmental Research Fellow</b> <i>Saint Croix Watershed Research Station - Science Museum of MN</i> Analyzed water samples for TP/TN, NO <sub>x</sub> , NH <sub>4</sub> , Chl- $\alpha$ . Analyzed sediment samples for TP, P Fractions, Biogenic Si, LOI Collected and processed water samples and sediment cores. Prepared diatom slides. Extracted eDNA	2018 - 2019
<b>Undergraduate Research Assistant</b> <i>University of WI River Falls - Environmental Science &amp; Geography Dept.</i> Conducted water quality monitoring on the Kinnickinnic and Willow rivers. Collaborated and engaged with local stake holders to address land-use decisions in the watershed. Coordinated and implemented earth science and sustainability education series. Monitored soil fertility on campus farm. Analyzed water samples for TSS and TP/TN	2017 - 2018

## FELLOWSHIPS AND GRANTS

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UMN - College of Biological Sciences Science Communication Intern ( <i>year</i> )	\$5,000
SCWRS - Environmental Research Fellowship ( <i>year</i> )	\$30,000
UWRF - Undergraduate Scholarly and Creative Activities Grant	\$2,500
UWRF - USDA Seed to Seed Research Fellowship ( <i>summer</i> )	\$6,000

## PUBLICATIONS & PRESENTATIONS

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### ORAL PRESENTATIONS

**Sauer, H.**, Dooley, M. (2018) *Our Polluted Waterways: A Gunpowder Mapping Project*. Midwest Undergraduate Geography Symposium (River Falls, WI), St. Croix Summit (Marine on Saint Croix, MN)

**Sauer, H.**, Dooley, M. (2018) *Confluence and Beyond: Exploration in Gunpowder Mapping*. North American Cartographic Information Society (Norfolk, VA)

### POSTER PRESENTATIONS

**Sauer, H.**, Beron, S., (2017) *Total Nitrogen and Total Phosphorus Loading within the Kinnickinnic Watershed*. Undergraduate Research and Scholarly Creative Activities Fall Gala (River Falls, WI)

**Sauer, H.**, (2018) *Our Polluted Waterways: A Gunpowder Mapping Project*. St. Croix Youth Summit (River Falls, WI), UW Undergraduate Research Symposium (Green Bay, WI),

**Sauer, H.**, Hamilton, T.L., Heathcote, A.J., Anderson, R., Umbanhowar Jr, C. (2020) *Biogeography of Sediment Microbes Across an Ecological Gradient in Minnesota*. ASLO-SFS 2020 Joint Meeting (Madison, WI) (*Cancelled due to COVID-19*)

### EXHIBITIONS

**Sauer, H.**, *Traveling Exhibition: Our Polluted Waterways* (2020) St. Croix Valley ArtReach (Stillwater, MN)

## PROFESSIONAL EXPERIENCE

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### Middle & High School Spanish Teacher

2013 - 2015

*New London, Ellsworth, & St. Croix Central School Districts*

Directed Spanish program for school district of 800+ students. Created 50+ individualized curricula and material. World language lead - Professional Learning Community. Developed strategies/lessons for inclusion with emphasis on individuals with disabilities.

## TECHNICAL SKILLS

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Programming languages, statistical analysis, and bioinformatics packages: Python, R, Mothur  
Cartographic and design packages: ArcGIS, QGIS, Mapbox, Carto, TerrSet, Adobe Creative Suite  
Other: Linux, Mac OS, Windows OS, Google Docs