

Emma A. Cheriegate

Department of Geography

The Pennsylvania State University

217 Walker Building

University Park, PA 16802

eacheriegate@gmail.com | +1 (661) 755-2322

[Website](#) | [LinkedIn](#) | [GitHub](#)

Education

- 2024 **MS, Geography – Ecohydrology and GIS**, *The Pennsylvania State University*
Thesis: Mapping Restoration Potential of Historical Wetlands in the Upper Mississippi River Basin
GPA: 4.0
Lab Affiliation: [Riparia Lab](#)
- 2019 **BS, Geography – Environmental Science & GIS**, *California State Polytechnic University, Pomona*
GPA: 3.7
- 2017 **AA, Geography**, *College of the Canyons*
GPA: 3.9
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Technical Proficiencies

- **Programming:** R, JavaScript, Python, HTML, CSS
 - **Software & Tools:** ArcGIS Pro, QGIS, Google Earth Engine, AWS, TensorFlow, GDAL, GRASS, SAGA, Access
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Professional Experience

- 2022 - Present **Graduate Research & Teaching Assistant**; *Riparia Lab, Department of Geography, The Pennsylvania State University*
- Developed and automated a remote sensing and geospatial methodology to identify and analyze over 4 million historic wetlands for water quality improvement (NASA & USDA-funded).
 - Facilitated the learning of 70 students in the practical applications of geospatial technologies and concepts in ArcGIS Pro/Online, cartography, remote sensing, and spatial analytics.
- 2024 **Remote Sensing Analyst | Team Lead**; *NASA DEVELOP, Jet Propulsion Laboratory*
- Led an intern team of 5 in designing and calibrating models to assess the impacts of environmental drivers on vegetation using NASA Landsat and Planet sensors.

- Created visualizations for non-technical audiences showcasing machine learning-based land cover change classifications and time series evaluations.
- 2020 - 2022 **Geospatial Analyst;** *EDM Services, Inc.*
- Managed the company-wide GIS database, aligning safety plans with regulatory standards.
 - Designed the first organizational training manual for new GIS employees and led onboarding sessions.
- 2019 **Project Scientist;** *Montrose Environmental Group*
- Analyzed and interpreted environmental regulations relevant to client operations, leading to the creation of technical reports that were utilized across the company.
 - Interfaced with all levels of government agencies to prepare permit applications and coordinate submittal to both clients and agencies.
 - Calculated emission inventories for permit applications and compliance demonstrations. Wrote and amended technical reports.
- 2019 **Teacher's Assistant;** *California Polytechnic Un Environmental Group*
- Analyzed and interpreted environmental regulations relevant to client operations, leading to the creation of technical reports that were utilized across the company.
 - Interfaced with all levels of government agencies to prepare permit applications and coordinate submittal to both clients and agencies.
- 2017 - 2018 **Research Assistant;** *Bright Water Foundation*
- Traveled to La Calle Real, Nicaragua to collect and analyze water quality data, contributing to the development of community water improvement plans.

Service Experience

- 2022 - Present **Graduate Representative;** *College of Earth and Mineral Sciences Sustainability Council, The Pennsylvania State University*
- 2022 - 2023 **Graduate Representative;** *Geographical Society, Department of Geography and Anthropology, California Polytechnic University*
- 2021 - 2022 **Researcher and Writer;** *Save the Water™*
- 2018 - 2019 **President;** *Department of Geography Resident Program, The Pennsylvania State University*
- 2018 - 2019 **Secretary;** *Pi Gamma Mu Honor Society, Department of Geography and Anthropology, California Polytechnic University*

Honors and Awards

- 2024 **Outstanding Graduate Teaching Assistant Award;** *Department of Geography, The Pennsylvania State University*
- 2023 **National Science Foundation IGE Program** (\$5,000, declined due to political unrest); *The Pennsylvania State University*
- 2019 **Outstanding Graduating Senior Award Assistant Award;** *Department of Geography and Anthropology, California State Polytechnic University, Pomona*
- 2019 **Most Involved Organization;** *Department of Geography and Anthropology, California State Polytechnic University, Pomona*
- 2019 **Wayne Abbott Swenson Scholarship;** *Department of Geography and Anthropology, California State Polytechnic University, Pomona*
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Student Supervision

- 2024 **Daniel Scharton;** *Department of Geography, The Pennsylvania State University*
- 2023 **Katie McGowan;** *Department of Geography, The Pennsylvania State University*