

# Kayla Coonen

920-841-2811 | [kayla.coonen@gmail.com](mailto:kayla.coonen@gmail.com) | [LinkedIn](#) | [kaylacoonenportfolio.weebly.com](http://kaylacoonenportfolio.weebly.com)

## EDUCATION

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### **Master of Science, Geospatial Sciences in Geography, Geology, and Planning**

August 2020

*Missouri State University, Springfield, MO*

- Gamma Theta Upsilon Honor Society

### **Bachelor of Science, Environmental Geography**

May 2018

*University of Wisconsin-Eau Claire, Eau Claire, WI*

- Minor in Economics
- Geospatial Certificate with an emphasis in Mapping

## EXPERIENCE

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### **Operational Technology Specialist**

Feb. 2021 - Current

*Kaukauna Utilities, Kaukauna, WI*

- Maintained and developed the utility's GIS, OMS, and AutoCAD systems for the Water and Electric Departments
- Developed applications with ArcCollector and Survey123 to gather data in the field
- Converted ArcFM Geometric Networks to the Utility Network offered in ArcPro
- Attended seminars, conferences, and pre-construction meetings

### **Land Use Specialist**

Oct. 2020 – Jan. 2021

*La Crosse County Zoning, Planning, and Land Information Department, La Crosse, WI*

- Contained knowledge of zoning, shoreland and floodplain ordinance regulations, interpreting land descriptions, soils and hydrology within the county
- Perform technical work relating to land use such as mapping, parcel assignment, and review of land use plans by issuing permits, conditional uses, variances, and map drafting
- Works with landowners, potential buyers, general contractors, etc. to answer questions and advise on land use issues and regulations
- Assist in running Board of Adjustment and Planning Resources and Development public hearings

### **Research Assistant**

Aug. 2018 – Aug. 2020

*Ozarks Environmental and Water Resources Institute (OEWRI), Springfield, MO*

- Project lead for GIS, sediment & water quality projects and assisted in technical report writing & creation of standard operating procedures (SOP)
- Collected field data using ArcCollector or Survey 123 applications with tablets/iPads & GNSS Surveyors
- Conducted geomorphic surveys using auto levels, total stations, RTK, and Trimbles
- Created watershed assessments using GIS, aerial photo interpretation, LiDAR, and watershed modeling
- Collected water quality samples to determine nonpoint source pollution by assessing pH, temperature, dissolved oxygen, bacteria, chloride, total nutrients, and total suspended sediment
- Monitored and quantified the volume, properties, and geochemistry of contaminated sediment
- Attended conferences and meetings to promote the work completed in OEWRI

### **Geospatial Information System (GIS) Intern**

Oct. 2017 – July 2018

*Eau Claire County Planning and Development Department, Eau Claire, WI*

- GIS parcel mapping interpreting legal descriptions and using coordinate geometry (COGO) procedures
- Create custom and standard map products for internal and external use
- Create Flood Hazard Mitigation Plan using FEMA data for 2018
- Georeferencing 1980s aerial photos of the county and land conservation maps

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## Undergraduate Research Assistant

Sept. 2016 – May 2018

*Geography and Anthropology Department at the University of Wisconsin – Eau Claire, Eau Claire, WI*

- Collaborated with two graduate students in their preliminary thesis work to identify linear dunes using LiDAR derived DEMs from the Geography Department at Minnesota State University, Mankato
- Groups investigated retired farmland to provide land use recommendations based on observed soil characteristics by assessing hand excavated soil pits

## Undergraduate Research Assistant

Sept. 2016-May 2018

*Economics Department at the University of Wisconsin – Eau Claire, Eau Claire, WI*

- Established a Scoring System Comparison of Climate Change Acceptance/Knowledge/Concern for Citizens in the United States & China from 2015/2017 using SPSS with a group to 10 people

## Student Assistant for Geography 104: Physical Environment

Sept. 2017 – Dec. 2017

*Geography and Anthropology Department at the University of Wisconsin – Eau Claire, Eau Claire, WI*

- Offer assistance to students doing lab work alongside the professor
- Explain scientific modeling to students without a geography background

## Summer Worker

June 2016 – Sept. 2016

*Darboy Joint Sanitary District, Darboy, WI*

- Gained understanding of city and county municipal units
- Turned water valves for the city, and tested water meters and hydrants

## PUBLICATIONS & PROJECTS

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Coonen, Kayla A., Stream Bank and Bar Erosion Contributions and Land Use Influence on Suspended Sediment Loads in Two Ozark Watersheds, Southeast Missouri (2020). MSU Graduate Theses. 3548.

<https://bearworks.missouristate.edu/theses/3548>

Coonen, K., Owen, M., Pavlowsky, R., Mississippi River Basin Healthy Watershed Initiative (MRBI) Watershed Assessment for Section of the Cuivre River Watershed (2020). Completed for the United States Department of Agriculture-Natural Resources Conservation Service.

[https://oewri.missouristate.edu/Assets/OEWRI/Final\\_Report\\_2020\\_MRBI\\_CoonCreekSandyForkWForkCuivreRiverHeadwaterIndianCk.pdf](https://oewri.missouristate.edu/Assets/OEWRI/Final_Report_2020_MRBI_CoonCreekSandyForkWForkCuivreRiverHeadwaterIndianCk.pdf)

Owen, M., Casagrand, S., Coonen, K., Pavlowsky, R., National Water Quality Initiative (NWQI) Watershed Assessment for Section of the Headwaters Petite Saline Creek Watershed (2020). Completed for the United States Department of Agriculture-Natural Resources Conservation Service.

[https://oewri.missouristate.edu/Assets/OEWRI/Final\\_Report\\_2020\\_NWQI\\_LittleHuntingSlough-BlackRiver.pdf](https://oewri.missouristate.edu/Assets/OEWRI/Final_Report_2020_NWQI_LittleHuntingSlough-BlackRiver.pdf)

Owen, M., Coonen, K., Pavlowsky, R., Post-Construction Water Quality Monitoring, South Creek at Campbell Avenue and Kansas Expressway, Springfield, Missouri (Under Review). Completed for the James River Basin Partnership. [https://oewri.missouristate.edu/Assets/OEWRI/QAPP\\_2019\\_SouthCreek.pdf](https://oewri.missouristate.edu/Assets/OEWRI/QAPP_2019_SouthCreek.pdf)

Owen, M., Coonen, K., Pavlowsky, R., Post-Harvest Activity Assessment using the U.S. Forest Service's Forest Soil Disturbance Monitoring Protocol (FSDMP), Mark Twain National Forest, Missouri (2020). Prepared for the U.S. Forest Service, Mark Twain National Forest.

[https://oewri.missouristate.edu/Assets/OEWRI/FSDMP\\_Year2report\\_03022020.pdf](https://oewri.missouristate.edu/Assets/OEWRI/FSDMP_Year2report_03022020.pdf)

Coonen, Kayla A., Standard Operating Procedure (SOP) for: Static Positioning with Bad Elf (2019). Completed for the Ozarks Environmental and Water Resources Institute (OEWRI) and Missouri State University.

[https://oewri.missouristate.edu/Assets/OEWRI/SOP\\_Bad\\_Elf\\_Static\\_Positioning\\_2019.pdf](https://oewri.missouristate.edu/Assets/OEWRI/SOP_Bad_Elf_Static_Positioning_2019.pdf)

Adams, H., Coonen, K., Rice, T., Owen, M., Pavlowsky, R., Mississippi River Basin Healthy Watershed Initiative (MRBI) Watershed Assessment for Section of the Lower Grand River Watershed (2019). Completed for the United States Department of Agriculture-Natural Resources Conservation Service.

[https://oewri.missouristate.edu/Assets/OEWRI/Final\\_Report\\_2019\\_LongBranchSpringBranchElkCreekTurkeyCreek\\_WatershedAssessment.pdf](https://oewri.missouristate.edu/Assets/OEWRI/Final_Report_2019_LongBranchSpringBranchElkCreekTurkeyCreek_WatershedAssessment.pdf)

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Reminga, K., Roman, G., Coonen, K., Owen, M., Pavlowsky, R., Mississippi River Basin Healthy Watershed Initiative (MRBI) Watershed Assessment for Section of the Apple Creek Watershed (2019). Completed for the United States Department of Agriculture-Natural Resources Conservation Service.

[https://oewri.missouristate.edu/Assets/OEWRI/Final\\_Report\\_2019\\_AppleCreek\\_WatershedAssessment.pdf](https://oewri.missouristate.edu/Assets/OEWRI/Final_Report_2019_AppleCreek_WatershedAssessment.pdf)

Owen, M., LeTarte, S., Pavlowsky, R., Adams, H., Coonen, K., Rice, T., "Flow and Water Quality Assessment of the Jordan Creek Underground, Springfield, Missouri" (2019). Prepared for the City of Springfield.

[https://oewri.missouristate.edu/Assets/OEWRI/jordan\\_report02282019Final.pdf](https://oewri.missouristate.edu/Assets/OEWRI/jordan_report02282019Final.pdf)

## PRESENTATIONS

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### Graduate

Coonen, K. Stream Bank and Bar Erosion Contributions and Land Use Influence on Suspended Sediment Loads in Two Ozark Watersheds, Southeast Missouri. Presented as MSU Graduate Thesis Defense, Springfield, MO, April 2020.

### Undergraduate

Coonen, K., Holmes, A., Rauland, A. Investigating Support for an International Climate Change Treaty Among Chinese and American Citizens: Comparing Results from Surveys Conducted in 2015 and 2017. Presented at Provost's Honors Symposium for Research, Scholarship, and Creative Activity in Eau Claire, WI, May 2018.

Coonen, K., Holmes, A., Rauland, A. Investigating Support for an International Climate Change Treaty Among Chinese and American Citizens: Comparing Results from Surveys Conducted in 2015 and 2017. Presented at UW System Symposium for Undergraduate Research, Scholarship, and Creative Activity in Green Bay, WI, May 2018.

Coonen, K. Geomorphic Investigations of Newly Identified Linear Dunes in West-Central Wisconsin. Presented at Fall 2017 Geography Capstone Celebration, December 2017.

Coker, A., Coonen, K., Cornet, C., Fang, Z., Holmes, A., Moran, A., Pike, A., Rauland, A., Strehlow, L. A Continuing Investigation of International Climate Change Views. Presented at the Wisconsin Economic Association Conference at Stevens Point, Wisconsin, November 2017.

Coonen, K., Freeburg, M., Tremain, T. Ecuador: Culture and Geography. Presented at the Celebration of Excellence in Research and Creative Activity at the University of Wisconsin-Eau Claire in Eau Claire, Wisconsin, May 2017.

Coonen, K., Cornett, C., and Wilson, D. Using Climate Change Acceptance/Knowledge Scores and Group Classifications to Assess Public Support for an International Climate Treaty and Climate Change Mitigation in the United States, China and Vietnam. Presented at the Celebration of Excellence in Research and Creative Activity at the University of Wisconsin-Eau Claire in Eau Claire, Wisconsin, May 2017.

Coonen, K., Cornett, C., and Pike, A. Using Climate Change Acceptance/Knowledge Scores and Group Classifications to Assess Public Support for an International Climate Treaty and Willingness-to Pay for Climate Change Mitigation in the United States, China and Vietnam. Presented at the UW System Symposium for Undergraduate Research, Scholarship, and Creative Activity in Stevens Point, Wisconsin, April 2017.

Coonen, K. International Views on Climate Change. Presented at the Wisconsin Economics Association Conference in Stevens Point, Wisconsin, October 2016.

## POSTER PRESENTATIONS

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### Graduate

Coonen, K., Owen, M., Pavlowsky, R. Nonpoint pollution source modeling and bank erosion contribution in Mineral Fork and Mill Creek watersheds, SE Missouri. Poster Presented at Missouri Natural Resources Conference at Tan-Tar-A Resort in Osage Beach, Missouri, February 2020.

Pavlowsky, R.T., J.D. Collins, M.H. Connolly, C.H. Yansa, J.W. Hess, K.A. Coonen, A. Gibson, and E.E. Struck, 2019. Long-term sediment yields from forested catchments in the Ozarks Highlands, Missouri. 50th Binghamton Geomorphology Symposium on "The BGS: 50 years of enhancing geomorphology." Metropolitan State University of Denver, CO. October 11-13, 2019.

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- Coonen, K., Bank erosion assessment using historical aerial photography and LiDAR in a Missouri Ozarks watershed. Poster presented at the American Association of Geographers Annual Meeting, Washington, D.C., April 2019.
- Coonen, K., Owen, M., Pavlowsky, R. Nonpoint pollution source modeling in Mineral Fork and Mill Creek watersheds, Washington County, Missouri: assessment of bank erosion inputs using historical aerial photography and LiDAR. Poster Presented at Upper Midwest Stream Restoration Symposium at the Radisson Hotel in La Crosse, Wisconsin, February 2019.
- Coonen, K., Owen, M., Pavlowsky, R. Nonpoint pollution modeling in Mineral Fork and Mill Creek watersheds, Washington County, Missouri: assessment of channel erosion inputs using LiDAR and historical aerial photography. Poster Presented at Missouri Natural Resources Conference at Tan-Tar-A Resort in Osage Beach, Missouri, February 2019.

### Undergraduate

- Coonen, K., Jansen, E. Geomorphic Investigations of Newly Identified Linear Dunes in Western Wisconsin, USA. Poster Presented at the Celebration of Excellence in Research and Creative Activity at the University of Wisconsin-Eau Claire in Eau Claire, Wisconsin, May 2017.
- Coonen, K., Holmes, A., Rauland, A. Investigating Support for an International Climate Change Treaty Among Chinese and American Citizens: Comparing Results from Surveys Conducted in 2015 and 2017. Poster presented at UW System Symposium for Undergraduate Research, Scholarship, and Creative Activity in Green Bay, WI, May 2018.
- Coonen, K., Holmes, A., Rauland, A. Investigating Support for an International Climate Change Treaty Among Chinese and American Citizens: Comparing Results from Surveys Conducted in 2015 and 2017. Poster presented at the Celebration of Excellence in Research and Creative Activity at the University of Wisconsin-Eau Claire in Eau Claire, Wisconsin, May 2018.
- Millett, J., Minnesota State University, Mankato (MSU-M), Anzalone, C., MSU-M, Coonen, K., University of Wisconsin – Eau Claire (UWEC), Jansen, E., UWEC, Daniel Garnder, MSU-M, Larson, P., MSU-M, Running, G., UWEC, Faulkner, D., UWEC, Schirmer, R., MSU-M. Sandy aeolian deposition in southeastern Minnesota and western Wisconsin: A forgotten and poorly understood sandy aeolian landscape. Preliminary Results. Poster presented at the American Association of Geographers Annual Meeting, New Orleans, LA, April 2018.
- Coonen, K. 2017. Soils and Land Use at the Henning's Lonesome Apple Tree Ridge Site, Eau Claire County, Wisconsin. Poster presented at the Celebration of Excellence in Research and Creative Activity at the University of Wisconsin-Eau Claire in Eau Claire, Wisconsin, May 2017.
- Coonen, K., Cornett, C., and Pike, A. Using Climate Change Acceptance/Knowledge Scores and Group Classifications to Assess Public Support for an International Climate Treaty and Willingness-to Pay for Climate Change Mitigation in the United States, China and Vietnam. Poster presented at the Celebration of Excellence in Research and Creative Activity at the University of Wisconsin-Eau Claire in Eau Claire, Wisconsin, May 2017.
- Coonen, K., Cornett, C., and Pike, A. Using Climate Change Acceptance/Knowledge Scores and Group Classifications to Assess Public Support for an International Climate Treaty and Willingness-to Pay for Climate Change Mitigation in the United States, China and Vietnam. Poster presented at the UW System Symposium for Undergraduate Research, Scholarship, and Creative Activity in Stevens Point, Wisconsin, April 2017.
- Coonen, K. 2017. Soils and Land Use at the Henning's Lonesome Apple Tree Ridge Site, Eau Claire County, Wisconsin. Poster presented at the American Association of Geographers Annual Meeting, Boston, MA, April 2017.

### VOLUNTEER

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- Student Volunteer at the Wisconsin Land Information Association Annual Conference in Elkhart Lake, WI, March 7-9, 2018.
- Student Volunteer at the West Lakes Division American Association of Geographers Conference in Eau Claire, WI, November 2015.

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## GRANTS

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- Coonen, K. 2020. Nonpoint Source Assessment of Mineral Fork and Mill Creek Watersheds, Southeast Missouri: Bank Erosion Contributions and Historical Mining Influences. Missouri State University Graduate College: Spring 2020 Thesis Funding Award - \$400.
- Coonen, K., Drost, E., Jansen, E. 2017. Geomorphic Investigations of Newly Identified Linear Dunes in West-central Wisconsin and Southeastern Minnesota. University of Wisconsin-Eau Claire, Office of Research and Sponsored Programs: Student Faculty Collaborative Research Grant - \$2,100.00.

## AWARDS

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### Best Student Poster

Poster Presented at Upper Midwest Stream Restoration Symposium at the Radisson Hotel in La Crosse, Wisconsin, February 2019 – Awarded \$50.

### Research Excellence in Geography

Department of Geography and Anthropology and UW-Eau Claire: May 2018

This is for a student who conducts exemplary research in a class and/or outside of class.

### Special Recognition of Scholarship

Department of Geography and Anthropology and UW-Eau Claire: May 2018

The department considered conference presentation: number of conferences, single authored, and if it was above and beyond a class assignment (GPA).

## MEMBERSHIPS

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|--|------------------------|
| <i>Wisconsin Public Power Association (WPPA)</i>   | Feb. 2021 – Current    |
| <i>Wisconsin Land Information Association (WLIA)</i>   | Oct. 2020 – Current    |
| <i>Gamma Theta Upsilon (GTU)</i>   | Sept. 2018 – Aug. 2020 |
| The international Geographical Honor Society. Must complete geographical coursework and maintain a 3.3 GPA |                        |
| <i>American Association of Geographers (AAG)</i>   | Year 2017, 2019        |

## ACADEMIC BLOGS

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- |   |   |
|---|---|
| Geographic Information Systems (GIS) I: | <a href="http://coonenkagis1.blogspot.com/">http://coonenkagis1.blogspot.com/</a>         |
| GIS II:                                 | <a href="http://coonenkageog337.blogspot.com/">http://coonenkageog337.blogspot.com/</a>   |
| Geospatial Field Methods:               | <a href="http://coonenka.blogspot.com/">http://coonenka.blogspot.com/</a>                 |
| Remote Sensing of the Environment:      | <a href="https://coonenkageog338.blogspot.com/">https://coonenkageog338.blogspot.com/</a> |
| Business Geography:                     | <a href="http://coonenkageog352.blogspot.com/">http://coonenkageog352.blogspot.com/</a>   |

## SKILLS

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### Geospatial

ArcGIS Products (Map, Pro, Collector, Online/Enterprise, Model Builder, SQL, Python)  
ESRI Licenses (Spatial, 3D, Business, Statistical Analyst)  
ERDAS Imagine, Remote Sensing  
Photogrammetry & LiDAR  
AutoCAD  
Operational Management System (OMS)

### Data Analysis

STEPL  
ACPF  
SPSS  
Microsoft Products  
Adobe Illustrator, Photoshop  
FlowTracker  
Hydraflow

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## Lab Techniques

IDEXX Quanti-Tray with Colilert reagent for Total Coliform and E. Coli  
Handheld XRF Analyzer (Soil geochemistry)  
Loss on Ignition (LOI) (Soil Organic Matter)  
Particle Size Analysis  
Total Suspended Solids  
XL25 Dual Channel pH/Ion Meter for Chloride Concentration Determination  
MS3 Magnetic Susceptibility System

## Field Research

YSI water quality sonde  
Solinst Levellogger and Barologger  
Water quality sample collection  
Sediment quality sample collection  
Soil coring, augers, profiles  
Optically stimulated luminescence dating (OSL)  
Munsell Color System

## Surveying

Topcon RTK  
Topcon Total Station  
Trimble GPS unit  
Bad Elf GNSS Surveyor  
iPads, Tablets  
Auto level  
Cross-sections  
Longitudinal Profiles