

## MARISSA KOPP

RENEW Postdoctoral Research Associate | [mkopp1398@gmail.com](mailto:mkopp1398@gmail.com) | [www.marissa-kopp.com](http://www.marissa-kopp.com)

### QUALIFICATIONS SUMMARY

---

- Cross-disciplinary scholar with 9+ years of experience in science, education, and outreach
- 6+ years of experience in climate science data collection and analysis resulting in >\$225k in awards/grants, >5 publications, and deliverables for county Climate Action Plan stakeholders
- Proven track record of project management, stakeholder engagement, and verbal and written communication to build relationships, inform local policy, and improve land management

### EDUCATION

---

Ph.D. *Spring '25*. Pennsylvania State University, Ecology (4.0 / 4.0) | Defended viva 4 Dec 2024

*Control Points of Soil Greenhouse Gasses in Forested Socioecological Systems*

B.S. 2019. Elizabethtown College, Environmental Science, *Summa Cum Laude* (4.0 / 4.0)

English (Professional Writing concentration) with Honors Thesis

*“Under Skies Less Serene”*: An Ecological Approach to the British Romantic Pastoral

### HIGHLIGHTED RESEARCH & PROGRAM MANAGEMENT EXPERIENCE

---

#### **Pennsylvania State University**

Graduate Environmental Researcher

Aug 2019 – May 2025

- Exceptional project manager leading federally funded climate research projects resulting in lasting collaborations and insights for national management and planning
- Translator of science to action through extensive public-facing outreach efforts, such as Project Director on \$3k grant to improve rural community-based outreach campaigns

Food-Energy-Water Nexus Research Trainee

Aug 2020 – May 2023

- Supported multi-stakeholder development of Climate Action & Adaptation Plan by co-mediating a 150+ public forum and reporting findings to regional county government
- Led co-design of Communications Toolkit & GIS analysis for effective public outreach
- Committed to improving scientist–stakeholder collaboration through forthcoming recommendations on building community relationships for knowledge co-production

#### **Elizabethtown College**

English Researcher

Aug 2018 – May 2019

- Expert oral and written communicator demonstrated by reviewing and synthesizing literature (>100 publications) into thesis and manuscript in environmental humanities

### HIGHLIGHTED COMMUNITY & STAKEHOLDER ENGAGEMENT EXPERIENCES

---

#### **Penn State Agriculture and Environment Center (Non-Profit)**

Watershed Engagement Intern

May 2021 – Nov 2021

- Supported community-based climate adaptation initiatives, emphasizing stakeholder collaboration and evidence-based practices for EPA’s Watershed Implementation Plan
- Steered and facilitated two-day watershed forum joined by 100+ scientists and citizens

#### **Horn Farm Center for Agricultural Education (Non-Profit)**

Digital Content Specialist

May 2019 – Aug 2019

- Developed digital resources and educational materials for non-profit to promote sustainable agriculture practices to a broad public audience

## **FUNDED RESEARCH GRANTS & AWARDS (TOTAL: >\$225K USD)**

---

2021–24	USDA NIFA Predoctoral Fellow. “Minimizing N pollution swapping—linking root traits to N <sub>2</sub> O emissions in edge-of-field forested riparian buffers.” (\$179,235)
2022–23	Graduate Student Competitive Grant, PSU College of Ag. Sciences. “Identifying Communication Control Points in Riparian Buffer Adoption.” (\$3,000)
2023–24	Paul Hand Award for Graduate Student Teaching, College of Ag Science (\$2,000)
2023	Victoria Braithwaite Research Excellence Award, Ecology IGDP (\$1,100)
2022	Graduate Student Travel Grant, PSU College of Agricultural Sciences (\$500)
2022	Internship Engagement Scholarship Award, LandscapeU NRT (\$3,000)
2019–21	Katherine Mabis McKenna Scholarship, Penn State University (\$8,000)
2019–20	Scarlett Fellowship in Watershed Stewardship, Penn State University (\$30,000)

## **TEACHING AND TUTORING EXPERIENCES**

---

2024	Graduate School Teaching Certificate, Pennsylvania State University Earned certification through Schreyer Institute for Teaching Excellence, which demonstrates commitment to evidence-based, equitable teaching
2022–23	ERM 397: Effective Communication in Environmental Science, PSU (3 credits) Developed curriculum and served as sole instructor of record FA 22 & 23
2022–24	Invited Guest Lecturer FOR 308: Forest Ecology, Pennsylvania State University (PA) ENG 244: Literature & the Environment, Rocky Mountain College (MT)
2017–19	In-Class Tutor of English Composition, Harrisburg Area Community College Embedded in-class tutor for 6 at-risk classes supporting 100+ to improve course pass rates in traditional, blended, and hybrid classroom models
2016–19	Peer Tutor of English Composition I + II, Harrisburg Area Community College Supported student success in science writing & presenting for ~15 hours per week for 8 semesters, including adult and English language learners
2019	SAT Writing & Language Tutor, Lancaster County Area Tutored three students to a score increase of at least 50 from baseline

## **OTHER PROFESSIONAL ROLES**

---

2018	Research Assistant, Elizabethtown College Advised by Tom Murray, Ph.D.† to perform toxicology study on shell growth and survivorship rates of <i>C. virginica</i> exposed to neonicotinoids
2017	Research Assistant, Penn State College of Medicine Advised by Christopher Sciamanna, M.D. to explore extent of forced recall test preparation to replace traditional classroom models
2017–19	Copyeditor, Harrisburg Area Community College & Private Contract Prepared textbooks for iBook publication, edited dissertation to APA style standards, and copyedited NIH Small Business Innovation grant pitch

## PUBLICATIONS (GOOGLE SCHOLAR PROFILE)

---

### PEER-REVIEWED

- Naylor, R., **Kopp, M.**, Irizarry, J., Foust, E., Goldberg, Z., Jones, M.E., Spencer, O., Banuna, L., & Sharma, S. (In Press). Graduate student perspectives on transdisciplinary research. *Sustainability Science*.
- Kopp, M.** & Webster, S. (2024). Reframing “harmony”: Humans as functional components in British Romantic pastoral ecosystems. *RoN*, 83, <https://ronjournal.org/s/6909>.
- Kopp, M.**, Alving, D., Blackman, T., Duncan, J., Kaye, J., & Kaye, M. (2023). Critical Zone perspectives for managing changing forests. *Forest Ecology and Management*. 528: 120627. <https://doi.org/10.1016/j.foreco.2022.120627>
- Primka, E.J. IV, Adams, T.S., Buck, A., Forsythe, B., Harper, J., **Kopp, M.**, Kaye, J., Eissenstat, D.M. (2023). Temporal patterns of fine root dynamics have little influence on seasonal soil CO<sub>2</sub> efflux in a mixed, mesic forest. *Ecosphere*, 14(10). <https://doi.org/10.1002/ecs2.4670>.
- Kopp, M.**, Smeglin, Y. H., Adams, T., Primka, E.J. IV, Bradley, B., Shi, Y., Eissenstat, D., & Kaye, J. (2022). Topography mediates the response of soil CO<sub>2</sub> efflux to precipitation over days, seasons, and years. *Ecosystems*. <https://doi.org/10.1002/ecs2.4670>.

### (SUBMITTED)

- Kopp, M.**, Cruz, S. M., & Olson, R. When leaders are hard to find: Reimagining opinion leaders in sparse networks. *Human Communications Research*.
- Cruz, S. M., Keatings, D. M., Cruz Crespo, Y. A., & **Kopp, M.** Testing the predictive power of a structural approach to message design: Persuasive effects among Republicans and Democrats. *Communication Research*.

### BOOK CHAPTERS

- Kopp, M.** (Accepted Chapter). “It’s not all numbers: Science, stories, and the case of academic ecology.” *Teaching with Science Writing in the Humanities Classroom*.

### TEAM PAPERS & WHITE PAPERS

- Kopp, M.**, Naylor, R.S., Whitley, H., Traub, J., Tallon, A., & Aviste, R. (2021). *Identifying Best Practices for Targeted Riparian Buffer Adoption & Outreach with Centre County Climate Adaptation Plan (CAP) Stakeholders*. Available at <https://tinyurl.com/4x78t3xx>
- Mediation of Environmental & Public Conflict Team. (2021). *Creating Dialogue & Facilitating a Climate Forum: Understanding Climate Impacts & Opportunities in the Centre County Region*. Available at <https://tinyurl.com/4bdynpjf>

### DATA SETS

- Kopp, M.**, Naylor, R.S., & Aviste, R. (2021). *Overlap of Biophysical Need for and Sociodemographic Indicators of Willingness to Adopt Riparian Buffers in Centre County, PA*. Pennsylvania State University. doi:10.26207/2dq0-a934.

### OTHER SCIENCE & TEACHING WRITING

- Kopp, M.** (Spring 2023). The student becomes the teacher: Instructing classes as a graduate student at Penn State. *Notes from The Field*, 19(2), 4–6.

## PRESENTATIONS

---

### INVITED

- Kopp, M.**, Kaye, J. (7 Sep 2023). “Shale Hills: Water Opportunities at a Long-Term Observatory.” Penn State Association of Water Students, Water Cooler Series. (Oral).
- Kopp, M.**, Kaye, J. (22 May 2023). “Shale Hills Critical Zone: Exploring the Biogeochemistry of Earth’s Outer Skin.” Penn State Climate Solutions Symposium. (Oral).

### CONTRIBUTED (\* = MENTEE)

- Cruz, S. M., Keating, D. M., Cruz Crespo, Y. A., & **Kopp, M.** (2024). “Testing the predictive power of a structural approach to message design: Persuasive effects among Republicans and Democrats.” Manuscript at 110th National Communication Association Convention.
- Gaydos, R., \* **Kopp, M.**, Cruz-Perez, R., Kaye, J. (2024). “Effects of Groundwater Levels on Soil CO<sub>2</sub> Efflux.” PSU Interdisciplinary Environmental Research Symposium. (Poster).
- Gaydos, R., \* **Kopp, M.**, Cruz-Perez, R., Kaye, J. (Nov. 2023). “The Effects of Groundwater Levels on Soil CO<sub>2</sub> Efflux.” NASA PA Space Grant Research Internship. (Oral).
- Kaye, J.P., Hodges, C., **Kopp, M.** (2023). “Controls on Soil CO<sub>2</sub> at the Shale Hills Critical Zone Observatory.” Northern Arizona University. Center for Ecology Science and Society.
- Kopp, M.** (July 2023). “Critical Zone Science: Exploring the Biogeochemistry of Earth’s Outer Skin.” GeoPeers REU (Oral).
- Kopp, M.**, Cruz, S., Kaye, J. (24 June 2023). “Concerned Without Connections: Finding Communication Superdiffusers Among Riparian Landowners in Pennsylvania.” Graduate Women in Science National Conference. Penn State. (Poster).
- Kopp, M.**, Aviste, R., & Naylor R.S. (20 Apr. 2023). “A Socio-ecological Approach to Spatially Targeting Riparian Buffer Outreach.” Transdisciplinary Research on Environmental Societies Dual-Title Launch. Penn State. (Poster).
- Forsythe, B., Horne, J., **Kopp, M.**, Davis, K. (23 Mar. 2023). “Shale Hills CZO: A Continuing Resource for Watershed Research.” Penn State Water Conference. (Poster).
- Kaye, J., **Kopp, M.**, Hodges, C. (26 Jan. 2023). “Controls on soil CO<sub>2</sub> at the Shale Hills Critical Zone Observatory.” Center for Ecosystem Science & Society Seminar Series. (Oral).
- Kopp** & Kaye, J. (2022). “Untangling Drivers of High Soil CO<sub>2</sub> Efflux from Forested Soils.” ASA, CSSA, SSSA International Meeting. *Best Overall Student Paper Award (\$300)*
- Kopp, M.** (2022) “Soil Respiration: Connecting Soils to Climate.” GNOMES. (Oral).
- Kopp, M.** (Feb. 2022). “Roots, Soils, or Bias? Exploring Controls on High Nighttime CO<sub>2</sub> Efflux from Near-Stream Forested Soils.” Penn State Ecology Colloquium. (Oral).
- Kopp, M.**, Aviste, R., & Naylor R.S. (Nov. 2021). “A Socio-ecological Approach to Spatially Targeting Riparian Buffer Outreach.” Lancaster-Lebanon Watershed Forum. (Poster).
- Kopp, M.**, Aviste, R., & Naylor R.S. (Nov. 2021). “Spatially Targeting Riparian Buffer Outreach.” 2021 Chesapeake Watershed Forum. (Oral).
- Kopp, M.** (Oct 2020). “Carbon Fluxes in Complex Terrain: Topographic Controls on the Response of Soil Respiration to Climatic Variables.” PSU Ecology Colloquium. (Oral).
- Smith, T., Barnica, J., Zerbe, A., & **Kopp, M.** (2019). “Embedded Tutoring: Reimagining the Tutor’s Relationship with Faculty and Developmental Writers.” Panel presentation at annual Mid-Atlantic Writing Centers Association (MAWCA) meeting. (Oral).
- Smith, T., Barnica, J., Bollinger, N., Zukowski, J., & **Kopp, M.** (2018). “Bridging the Gap: Establishing Collaborative Relationships with Developmental Writers through In-Class Tutoring.” Panel presentation at MAWCA. (Oral).

## **SYNERGISTIC ACTIVITIES AND SERVICES**

---

### **COMMUNICATION & INCLUSIVE LANGUAGE TRAINING**

2024	ComSciCon Flagship Workshop (Selected Participant), Harvard University
2021	The Power of Language Workshop, PSU Ecology DEI Committee
2021	Safer People Safer Places Training, PSU Center for Sexual & Gender Diversity
2021	Inclusive and Critical Mentor Training & Workshop, PSU Ecology Program
2020	COMPASS Science Communication Workshop
2019	Professional Development in Environmental Outreach Workshop, PSU Extension

### **DEPARTMENTAL & PROGRAMMATIC SERVICE**

2025	Newsletter Editor & Service Assistant, PSU Ecology Program
2020–24	Host, PSU Ecology Recruitment, Seminar Series, & Graduate School Open House
2020–22	Program Chair Representative, PSU Ecology Graduate Student Organization
2020–	Member, PSU Ecology Program Committee for Diversity, Equity, and Inclusion

### **MENTORSHIP**

2023–24	Mentor, PA Space Grant Consortium Research Internship Program
2021	Mentor, Society for Wetland Scientists' Multicultural Mentoring Program
2020–22	Graduate Peer Mentor, Ecology Intercollege Graduate Degree Program

### **OUTREACH (SELECT)**

2025–	Curriculum Contributor, <i>How Do Trees Beat Deadly Heat?</i> BiteScis Lesson Plans
2023	Contributor, <i>Diverse Forests Create a Healthier Environment</i> , Ag Progress Days
2023	Volunteer, PA School for Excellence in the Agricultural Sciences
2023	Volunteer, Arte-Suelo-Ser, Easterly Parkway Elementary Science Fair
2021–22	Volunteer, Digging Deeper: The Story of Soil, PSU Arboretum

### **SYMPOSIA & WORKSHOPS**

2023–24	Panelist, PSU Huck USDA Predoctoral Fellowship Prep Workshop
2021	Steering Committee, Lancaster-Lebanon Watershed Science Symposium

### **HONORS**

---

2019	Christian S. Wenger English Prize, Elizabethtown College
2019	Louise Baugher Black Award for Non-Fiction Prose, Elizabethtown College
2018	Writing Center Tutor Award, Harrisburg Area Community College
2017–19	Presidential Scholarship, Elizabethtown College
2017	National Tutor Award, Harrisburg Area Community College

### **PROFESSIONAL CERTIFICATIONS**

---

2025	Corporate Value Chain (Scope 3) Certification, Greenhouse Gas Protocol
2025	Scope 2 eLearning Certification, Greenhouse Gas Protocol