

# Mallika A. Nocco – Curriculum Vitae

Department of Biological Systems Engineering  
University of Wisconsin—Madison  
460 Henry Mall  
Madison, 53706  
[nocco@wisc.edu](mailto:nocco@wisc.edu)  
<https://www.irrigationlab.com>  
<https://www.watertalkpodcast.com>

## EDUCATION

- 2017 PhD, Environment and Resources  
University of Wisconsin-Madison, Madison WI  
Dissertation title: Biophysical impacts of irrigated agriculture on water and energy cycles in the Wisconsin Central Sands
- 2012 MS, Soil Science  
University of Wisconsin-Madison, Madison WI  
Thesis Title: Vegetation type changes biophysical and biogeochemical cycling in small-scale urban stormwater basins
- 2004 BA, Cultural Studies and Comparative Literature; Philosophy  
University of Minnesota-Twin Cities, Minneapolis MN

## PROFESSIONAL EXPERIENCE

- 2024-present *Assistant Professor & State Extension Specialist.* Agricultural Water Management. Biological Systems Engineering. University of Wisconsin-Madison, Madison WI
- 2019-2023 *Assistant Professor & Specialist of Cooperative Extension.* Soil-Plant-Water Relations and Irrigation Management. Department of Land, Air, and Water Resources. University of California-Davis, Davis CA
- 2017-2019 *David H. Smith Conservation Postdoctoral Research Fellow.* Department of Soil, Water, and Climate. University of Minnesota-Twin Cities, St. Paul MN
- 2016-2017 *Wisconsin Potato Industry Board Distinguished Graduate Fellow.* Department of Agronomy. University of Wisconsin-Madison, Madison WI
- 2014-2016 *Science to Achieve Results (EPA STAR) Fellow.* United States Environmental Protection Agency. University of Wisconsin-Madison, Madison WI

2013-2014	<i>Smith Family Distinguished Graduate Fellow.</i> Department of Agronomy. University of Wisconsin-Madison, Madison WI
2012-2013	<i>Graduate Research Assistant.</i> Department of Agronomy. University of Wisconsin-Madison, Madison WI
2011-2012	<i>Graduate Teaching Assistant.</i> Department of Zoology. University of Wisconsin-Madison, Madison, WI
2010-2011	<i>Graduate Research Assistant.</i> Department of Soil Science. University of Wisconsin-Madison, Madison WI
2004-2009	<i>Professional Healthcare Representative.</i> Pfizer Pharmaceuticals Inc., Madison WI

## PEER-REVIEWED PUBLICATIONS

\*equal contribution, #advisee or mentee

20. Savchik P, **MA Nocco**, I Kisekka. Mapping Almond Stem Water Potential using Machine Learning and Multispectral Imagery. *Irrigation Science* (accepted in press)
19. Bambach N\* ,K Knipper\*, AJ McElrone, **MA Nocco**, A Torres-Rua, W Kustas, M Anderson, S Castro, **E Edwards**<sup>#</sup>, M Duran-Gomez, **A Gal**<sup>#</sup>, P Tolentino, I Wright, M Roby, F Gao, J Alfieri, J Prueger, L Hipps, S Saa. The Tree-crop Remote sensing of Evapotranspiration eXperiment (T-REX): A science-based path for sustainable water management and climate resilience. *Bulletin of the American Meteorological Society*, 105(1): E257–E284. [doi.org/10.1175/BAMS-D-22-0118.1](https://doi.org/10.1175/BAMS-D-22-0118.1)
18. Smidt SJ, EMK Haacker, X Bai, K Cherkauer, B Choat, O Crompton, JM Deines, J Groh, SM Guzmán, S Hartman, AD Kendall<sup>1</sup>, M Safeeq, W Kustas, BM McGill, **MA Nocco**, J Pensky, J Rapp, A Schreiner-Mcgraw, M Sprenger, L Wan, L Weldegebriel, S Zipper, D Zoccatelli. 2023. Forming the Future of Agrohydrology. *Earth's Future*. 11(12): e2022EF003410. [doi.org/10.1029/2022EF003410](https://doi.org/10.1029/2022EF003410)
17. Moonilal<sup>#</sup> NI, KA Sklenka, **MA Nocco**, R Lal. 2023. Rehabilitative capacity of amendments following artificial topsoil erosion/ deposition in maize. *Field Crops Research*, 304: 109178. [doi.org/10.1016/j.fcr.2023.109178](https://doi.org/10.1016/j.fcr.2023.109178)
16. Holzer<sup>#</sup> IO, **MA Nocco**, BZ Houlton. Direct evidence for atmospheric carbon dioxide removal via enhanced weathering in cropland soil. 2023. *Environmental Research Communications*, 5, 101004. [doi.org/10.1088/2515-7620/acfd89](https://doi.org/10.1088/2515-7620/acfd89)
15. McDerimid S, **MA Nocco**<sup>\*</sup>, P Lawston-Parker\*, J Keune, Y Pokhrel, M Jain, JJ Jägermeyr, L Brocca, C Massari, A Jones, P Vahmani, W Thiery, Y Yao, A Bell, L Chen, W Dorigo, N Hanasaki, S Jasechko, M Lo, R Mahmood, V Mishra, N Mueller, D Niyogi, S Rabin, L Sloat, Y Wada, L Zappa, F Chen, B Cook, H Kim, D Lombardozzi, J Polcher, D Ryu, J Santanello, Y Satoh, S Seneviratne, D Singh, T Yokohata. 2023. Irrigation in the Earth system. *Nature Reviews Earth and Environment*, 4, 435-453. [doi.org/10.1038/s43017-023-00438-5](https://doi.org/10.1038/s43017-023-00438-5).
14. Hao X, MA Abou Najm, KL Steenwerth, **MA Nocco**, C Basset, A Dacacche. 2023. Are there universal soil responses to cover cropping? A systematic review. *Science of the Total Environment*. <http://doi.org/10.1016/j.scitotenv.2022.160600>
13. Jha<sup>#</sup> G, N Floyd, R Schmidt, K Suvočarev, D Diaz<sup>#</sup>, I Kisekka, K Scow, **MA Nocco**. 2022. Irrigation decision support systems (IDSS) for California's water-nutrient-energy nexus. *Agronomy*, 12(8): 1962. [doi.org/10.3390/agronomy12081962](https://doi.org/10.3390/agronomy12081962)
12. Ebert<sup>#</sup> LA, A Talib, SC Zipper, AR Desai, KT Paw U, AJ Chisholm, J Prater, **MA Nocco**. 2022. How high to fly? Mapping evapotranspiration from remotely piloted aircrafts at different elevations. *Remote Sensing*, 14(7): 1660. [doi.org/10.3390/rs14071660](https://doi.org/10.3390/rs14071660)

11. Jha<sup>#</sup> G, V Kankarla, E McLennon, S Pal, D Sihi, B Dari, D Diaz<sup>#</sup>, **MA Nocco**. 2021. Per- and Polyfluoroalkyl Substances (PFAS) in Integrated Crop-Livestock Systems: Environmental Exposure and Human Health Risks. *International Journal of Environmental Research and Public Health*, 18(23), 12550. [doi.org/10.3390/ijerph182312550](https://doi.org/10.3390/ijerph182312550)
10. Smail RS, **MA Nocco**, JB Colquhoun, and Y Wang. 2021. Remotely-sensed water budgets for Wisconsin agriculture. *Agricultural Water Management*, 258: 107187. [doi.org/10.1016/j.agwat.2021.107187](https://doi.org/10.1016/j.agwat.2021.107187)
9. Jha<sup>#</sup> G, D Sihi, B Dari, H Kaur, **MA Nocco**, AL Ulery, K Lombard. 2021. Rapid and Inexpensive Assessment of Soil Total Iron Using NixPro Color Sensor. *Agricultural and Environmental Letters*, 6:e20050. [doi.org/10.1002/ael2.20050](https://doi.org/10.1002/ael2.20050)
8. **Nocco MA**, BM McGill\*, CM MacKenzie\*, RK Tonietto, J Dudney, MC Bletz, T Young, SE Kuebbing. 2021. Mentorship, equity, and research productivity: lessons from a pandemic. *Biological Conservation*, 255. [doi:10.1016/j.biocon.2021.108966](https://doi.org/10.1016/j.biocon.2021.108966)
7. **Nocco MA**, NW Feinstein, MN Stock, BM McGill, and CJ Kucharik. 2020. Knowledge co-production with agricultural trade associations. *Water* 12(11), 3236. [doi: 10.3390/w12113236](https://doi.org/10.3390/w12113236)
6. MacKenzie\* CM, T Chang\*, **MA Nocco\***, RS Barak, MC Bletz, SE Kuebbing, and M Dombeck. 2020. Recurrent neural network analysis reveals strong positive public sentiment towards U.S. national monuments. *Conservation Letters* 13(6): e12747. [doi: 10.1111/conl.12747](https://doi.org/10.1111/conl.12747)
5. **Nocco MA**, SC Zipper, EG Booth, CR Cummings, SP Loheide II, CJ Kucharik. 2019. Combining evapotranspiration and apparent electrical conductivity mapping to identify precision irrigation strategies. *Remote Sensing*, 11(21): 2460. [doi: 10.3390/rs11212460](https://doi.org/10.3390/rs11212460)
4. **Nocco MA**, RA Smail, CJ Kucharik. 2019. Observation of irrigation-induced climate change in the Midwest United States. *Global Change Biology*, 25: 3472-3484. [doi: 10.1111/gcb.14725](https://doi.org/10.1111/gcb.14725)
3. **Nocco MA**, MD Ruark, and CJ Kucharik. 2019. Apparent electrical conductivity predicts physical properties of coarse soils. *Geoderma*, 335: 1-11. [doi: 10.1016/j.geoderma.2018.07.047](https://doi.org/10.1016/j.geoderma.2018.07.047)
2. **Nocco MA**, GJ Kraft, SP Loheide II, and CJ Kucharik. 2018. Drivers of potential recharge from irrigated agroecosystems in the Wisconsin Central Sands. *Vadose Zone Journal*, 17(1). [doi: 10.2136/vzj2017.01.0008](https://doi.org/10.2136/vzj2017.01.0008)
1. **Nocco MA**, SE Rouse, and NJ Balster. 2016. Vegetation type alters water and nitrogen budgets in a controlled, replicated experiment on residential-sized rain gardens planted with prairie, shrub, and turfgrass. *Urban Ecosystems* 19(4): 1665-1691. [doi:10.1007/s11252-016-0568-7](https://doi.org/10.1007/s11252-016-0568-7)

### **PUBLISHED REPORTS & COMMENTARIES**

- MacKenzie CM, RS Barak, S Bayer, MC Bletz, MW Brunson, J Dudney, OG Gaoue, JL Gill, A Harris, SE Kuebbing, BM McGill, **MA Nocco**, RK Tonietto, ML Vahsen, EF Warin. 2020. Plant Love Stories: Share your story and grow a movement. *Bulletin of the Ecological Society of America*, 101(2). [doi: 10.1002/bes2.1663](https://doi.org/10.1002/bes2.1663)
- MacKenzie CM, S Kuebbing, RS Barak, M Bletz, J Dudney, BM McGill, **MA Nocco**, T Young, RK Tonietto. 2019. We do not want to “cure plant blindness” we want to grow plant love. *Plants, People, Planet*, 1(3): 139-141. [doi: 10.1002/ppp3.10062](https://doi.org/10.1002/ppp3.10062)

Kucharik, CJ, GJ Kraft, SP Loheide II, and **MA Nocco**. 2015. Impacts of potato and maize management and climate change on groundwater recharge across the Central Sands. Final Report to the Wisconsin Department of Natural Resources for Project #215.

## GRANTS AND FELLOWSHIPS

*\$18,594,990 awarded (\$3,137,308 as PI)*

- 2024 *Science Communication Identities Project Fellowship (\$5000+training)*, Metcalf Institute (University of Rhode Island) & Knight Center for Environmental Journalism (Michigan State University). Role: Fellow
- 2023-2025 *Enhancing climate Resilience of Small Farms with Waste-Derived Engineered Hydrogels (\$1,737,390)*, California Climate Action Seed Grant. University of California Office of Research & Innovation. Role: Co-PI
- 2022-2027 *Climate-smart irrigation for drought, fertility, & structural resilience in almond systems (\$1,849,558)*, USDA NRCS Conservation Innovation On-Farm Trials Program. Role: PI
- 2021-2026 *Assessing the potential of regenerative agriculture to support vineyard soil health. (\$999,093)*, Foundation for Food and Agricultural Research. Role: Co-PI.
- 2021-2026 *Sustainability of Groundwater and Irrigated Agriculture in the Western United States under a Changing Climate (\$9,999,987)*, USDA National Institute for Food and Agriculture (NIFA). Role: Co-PI (Extension Lead).
- 2021-2022 *Satellite-based Precision Irrigation and Nitrogen Management for Processing Tomatoes (\$21,000)*, California Tomato Research Institute. Role: Co-PI
- 2021-2022 *Water Talk: A Statewide Extension Podcasting Internship (\$5,943)*, Renewable Resources Extension Act Student Intern Grants Program. Role: PI
- 2021-2024 *Winter recharge and cover crop evaluation on small farms (\$449,995)*, California Department of Food and Agriculture Specialty Crop Block Grant Program. Role: Co-PI.
- 2021-2024 *Co-managing deficit irrigation-disease interactions in tomatoes to optimize water conservation and crop productivity (\$449,132)*, California Department of Food and Agriculture Specialty Crop Block Grant Program. Role: Co-PI
- 2021-2022 *Deficit irrigation and salinity impacts on processing tomato nutrition and quality (\$34,760)*, California League of Food Processors. Role: PI

- 2021-2025 Remote-controlled evaluation of distribution uniformity and stem water potential: Extending imagery to integrated decision support (**\$433,828**), Almond Board of California. Role: PI
- 2021-2023 Climate-smart actions and indicators for increasing available water capacity of California soils (**\$24,943**), California Institute for Water Resources. Role: PI
- 2021-2023 Optimizing irrigation innovation, salinity management, and soil health in California processing tomato systems (**\$394,497**), California Department of Food and Agriculture Specialty Crop Block Grant Program. Role: PI
- 2020-2021 *Water Talk: A Statewide Extension Podcasting Internship* (**\$5,971**), Renewable Resources Extension Act Student Intern Grants Program. Role: PI
- 2020-2021 Quantifying water use of cover crops in rotation with rice (**\$31,000**), Rice Research Board. Role: Co-PI
- 2018-2024 *California Energy Product Evaluation Hub: Russell Ranch Research* (**\$625,257**), California Energy Commission. Role: Assistant Researcher
- 2020-2022 *The Phenotyping Mobile Optical Platform (PhenoMOP)* (**\$166,164**), USDA Equipment Grants Program. Role: Co-PI
- 2020-2022 Assessment of the variability in soil health indicators and incorporating healthy soil management practices into the context of Napa Valley, Paso Robles, and Lodi terroirs (**\$235,780**), American Vineyard Foundation. Role: Co-PI
- 2020-2021 How do different soil types impact physiology, yield, and quality under late-season deficit irrigation? (**\$36,957**), California Tomato Research Institute. Role: PI
- 2019-2020 *Using unmanned aerial vehicles (UAVs) for variable rate soil and water management in the Wisconsin Central Sands* (**\$15,000**), Wisconsin Potato and Vegetable Growers Association Innovative Potato Research Grant Program. Role: PI
- 2017-2019 Water scarcity amidst abundance: A call for adaptive strategies to manage freshwaters, forests, and irrigated agroecosystems throughout sandy aquifers in the Northern Great Lake States (**\$150,000+training**), David H. Smith Conservation Research Postdoctoral Fellowship Program. Role: Fellow/PI

- 2016-2017 *Consequences of irrigated agriculture for water resources and climate in the Wisconsin Central Sands (\$40,500)*, Wisconsin Potato Industry Board Distinguished Graduate Fellowship in Hydrology. Role: Fellow/PI
- 2016-2020 Quantifying the effectiveness of irrigation management strategies to increase crop water use efficiency in the Wisconsin Central Sands (**\$122,000**), United States Department of Agriculture Hatch Program. Role: Unlisted co-PI (co-wrote with CJ Kucharik)
- 2014-2016 *Potatoes for trout: Managing agricultural and aquatic ecosystem services in the Wisconsin Central Sands (\$118,000)*, United States Environmental Protection Agency Science to Achieve Results (EPA STAR) Graduate Fellowship. Role: Fellow/PI
- 2013-2015 *Impacts of crop management and climate change on hydrology across the Wisconsin Central Sands (\$9,999)*, United States Department of Agriculture North Central Region Sustainable Agriculture Research and Education (USDA NCR-SARE) Graduate Student Grant. Role: PI
- 2013-2014 *Smith Family Wisconsin Distinguished Graduate Fellowship (\$40,500)*, University of Wisconsin Department of Agronomy. Role: Fellow/PI
- 2013 *Irrigation and climate impacts to the water-energy balance of the WI Central Sands (\$5,000)*, Decagon Devices G.A. Harris Research Instrumentation Fellowship. Role: PI
- 2012-2015 *Impacts of potato and maize management and climate change on groundwater recharge across the Central Sands (\$132,606)*, United States Department of Agriculture Hatch Program. Role: Unlisted co-PI (co-wrote with CJ Kucharik and GJ Kraft)
- 2012-2014 *Impacts of crop management and climate change on groundwater recharge across the Central Sands (\$36,000)*, University of Wisconsin Consortium for Extension and Research in Agriculture and Natural Resources (CERANR). Role: Unlisted co-PI (co-wrote with CJ Kucharik and GJ Kraft)

### AWARDS

- 2023 *Conservation Innovation Award*. Awarded by the Soil and Water Conservation Society for the Water Talk Podcast Extension Program.
- 2022 *Award for Excellence in Service to Graduate Students*. Awarded by the University of California, Davis Graduate Student Association
- 2016 *Best Student Oral Presentation*. American Society of Agronomy Annual Meeting. Awarded by the Evapotranspiration Measurement and Modeling Community. \$200 award.

- 2016 *Second Place, Scholarly Poster Competition.* American Society of Agronomy Annual Meeting. Awarded by the Precision Agriculture Community. \$300 award.
- 2015 *First Place, Scholarly Poster and Lightning Oral Competition.* Soil Science Society of America Annual Meeting. Awarded by the Soil Physics and Hydrology Community. \$300 award and signed edition of *Soil Physics Exercises*.
- 2008 *Regional Sales Performance Award.* Urology and Respiratory Division. Pfizer Pharmaceuticals, Inc. Midwestern Division. \$2500 award.
- 2007 *'Get After It' Sildenafil Market Share Performance Award.* Urology and Respiratory Division. Pfizer Pharmaceuticals, Inc. \$2500 award.
- 2005 *Regional Sales Performance Award.* Urology and Respiratory Division. Pfizer Pharmaceuticals, Inc. Midwestern Division. \$2500 award.

### **EXTENSION PRESENTATIONS, WORKSHOPS, & EVENTS**

#### **2024**

72. **'Climate change and agriculture: water'**, Presenter and Panelist. Climate change and agriculture: air, water, and soil. American Association for the Advancement of Science (AAAS) SciLine Media Briefing. 4/9/24. >55 live press participants.
71. **'Irrigation Practices Survey and Future Research Focus'**, Presenter. Wisconsin Potato and Vegetable Growers Groundwater Task Force Meeting. 4/8/24.
70. **'Conservation practices to improve water quality in vegetable and potato production systems'**. Round Table Panelist. Hosted by Farmers of the Roch-a-Cri, a producer-led watershed protection group. Hancock, CA. 3/6/24. >30 participants.

#### **2023**

69. **'Evapotranspiration, Soil Sensors, & Remote Sensing for Irrigation Scheduling'** Presenter. Ag Technology Field Day—Innovations in Agricultural Irrigation. Fresno State Farm Laboratory and Center for Irrigation Technology. 10/28/23. 120 participants.
68. **'Sensing crop water stress with thermal imagery'**, Presenter. University of California Cooperative Extension Drone Camp. California State Monterey. 6/29/23. >140 participants.
67. **'Irrigation Re-imagined: Growing resilience in agriculture'**. A free local-to-global conversation. Presenter and Panelist. Aspen Global Change Institute and the Colorado River District. Carbondale, CO and Livestreamed. 6/7/23. >50 in person and virtual participants

66. **‘What is ET (and why should you care)?’—South San Joaquin Valley**. Presenter. Fundamentals of Irrigation Scheduling Clinic. Co-hosted by the Almond Board of California and University of California Cooperative Extension. Bakersfield, CA. 5/23/23. >40 participants.

65. **‘What is ET (and why should you care)?’—North San Joaquin Valley**. Presenter. Fundamentals of Irrigation Scheduling Clinic. Co-hosted by the Almond Board of California and University of California Cooperative Extension. Modesto, CA. 5/4/23. >50 participants.

64. **‘Outreach talks and skills for extension’**. Presenter. Professors for the Future Workshop. Davis, CA. 5/2/23. 29 participants.

63. **‘What’s New in the World of Water’**. Presenter and Panelist. The 2023 University of California Agriculture and Natural Resources Statewide Conference. Fresno, CA. 4/25/23. >100 participants.

62. **‘What is ET (and why should you care)?’—Sacramento Valley**. Presenter. Fundamentals of Irrigation Scheduling Clinic. Co-hosted by the Almond Board of California and University of California Cooperative Extension. Orland, CA. 4/20/23. >60 participants.

61. **‘Water for Ag, Ag for Water’**. Regenerative Agriculture: digging deeper into scope and practices. Presenter and Panelist. The Rockefeller Foundation Retreat. Davis, California. 1/30/23. >75 people.

60. **‘Irrigation Management for Profitable Almond Production’**. Presenter. North San Joaquin Valley Almond Day. University of California Cooperative Extension. Modesto, CA. 1/12/23. 255 participants.

## 2022

59. **‘Irrigation in Stressful Times’**. Presenter and Panelist. The 2022 Almond Conference. Sacramento, CA. 12/7/22. >300 participants.

58. **‘Drought-resistant perennial cover crops and Deep Root Irrigation’** Presenter. Statewide Soil-Water Interface Expert Convening: Cover Crops’ Impact on Water Budgets, CDFA and Sustainable Conservation, University of California, Merced. 10/18/22. >80 participants.

57. **‘Cover crops, stacked soil health practices, and water cycling’**, Moderator. Statewide Soil-Water Interface Expert Convening: Cover Crops’ Impact on Water Budgets, CDFA and Sustainable Conservation, University of California, Merced. 10/18/22. >80 participants.

56. **‘Cannabis Farmers Town Hall’**, Presenter. Soil and Water Sustainability Practices Scoping, University of California Berkeley Cannabis Research Center. 9/16/22. >50 participants.

55. **‘Tomato Irrigation-Disease Interactions’**, Presenter. University of California Cooperative Extension Tomato Disease Management Field Day. 8/17/22. >80 participants.



54. **'California Irrigation Decision Support Systems Field Day'**, Presenter and Organizer. Winters, CA, 8/03/22. 30 participants.
53. **'Water and Soil Conservation in Agriculture'**, Presenter. Resonance and Climate Change Lecture Series. 6/30/22. 20 participants.
52. **'Sensing crop water stress with thermal imagery'**, Presenter. University of California Cooperative Extension Drone Camp. California State Monterey. 6/30/22. 90 participants.
51. **'Remotely Sensing Almond Water Stress'**, Presenter. University of California Cooperative Extension Chico Almond Variety Trial & Irrigation Management Field Day. 6/26/22. 25 participants.
50. **'Water Wizards 4-H Elkus Ranch Field Demonstration'**, Organizer, Elementary and Middle School Students, Oakland Unified School District, Elkus Ranch, Half Moon Bay, CA. 5/9/22-5/10/22. 120 participants.
49. **'Deficit Irrigation 101'**, Presenter. University of California Cooperative Extension Low Water Farming Field Day, Black Mountain Ranch, Marin County. 4/26/22. 55 participants.
48. **'Deficit irrigation in processing tomato: Impacts to yield, quality, human nutrition, and soil biogeochemistry'**, Presenter. University of California Cooperative Extension Spring Crop Update, West Side Research and Extension Center. 4/6/22. 50 participants.
47. **'Remote-controlled evaluation of distribution uniformity and stem water potential: Extending imagery to integrated decision support'**, Presenter. Almond Board of California Strategic Irrigation Portfolio Annual Meeting. 2/15/22. 65 participants.
46. **'What's new in irrigation technology?'**, Presenter. University of California Cooperative Extension South Sacramento Valley Winter Almond Meeting. 1/20/22. 50 participants.
45. **'Remote sensing tools for irrigation management'** Presenter. UCANR Statewide Pistachio Day. 1/19/22. 278 participants.

## **2021**

44. **'Can we use commercial UAS to sense stem water potential and distribution uniformity?'** Presenter (Poster). Rooted In Success: The 2021 Almond Conference. 12/9/21.
43. **'How do different soil types impact physiology, yield, and quality under late-season deficit irrigation'**, Presenter. California Tomato Research Institute Meeting. 12/2/21. 25 participants.
42. **'Soil Sensors, Remote Sensing, & Irrigation Scheduling'** Presenter. Ag Technology Field Day—Innovations in Agricultural Irrigation. Fresno State Farm Laboratory and Center for Irrigation Technology. 10/29/21. 275 participants.

41. **'California Irrigation Decision Support Systems Field Day'**, Presenter. Field Day Demonstration for Government, Industry, Growers, and Extension Advisors. 8/11/21. 25 participants.
40. **'Sensing Crop Water Stress with Thermal Imagery'**, Presenter. University of California Agriculture and Natural Resources Drone Camp 2021. Presentation. 7/30/21. 95 participants.
39. **'Drone Imagery Processing with Agisoft Metashape'** Presenter. University of California Agriculture and Natural Resources Drone Camp 2021. Workshop. 7/28/21. 114 participants.
38. **'Drought: Ask the Experts'**, Panelist. University of California Agriculture and Natural Resources. Facebook Live Event with Drs. Faith Kearns and Sam Sandoval. 6/21/21.
37. **'Understanding soil salinity and salinity in lab water reports'**, Presenter. University of California Agriculture and Natural Resources Turning Lab Reports To Action. 6/11/21. 22 participants.
36. **'Deficit irrigation & drought management in Marin & Sonoma Counties'**, Presenter. North Bay Drought Webinar: Actions to Take Now. 5/4/21. 74 participants.
35. **'California Irrigation Decision Support Systems'**, Presenter. 20 participants. 3/15/21.
34. **'Deficit irrigation and salinity impacts on processing tomato nutrition and quality'**, Presenter. California League of Food Processors. 2/24/21.
33. **'Remote-controlled evaluation of distribution uniformity and stem water potential: Extending imagery to integrated decision support'**, Presenter. Almond Board of California Strategic Irrigation Portfolio Annual Meeting. 2/17/21. 25 participants.

## **2020**

32. **'How do different soil types impact physiology, yield, and quality under late-season deficit irrigation'**, Presenter. California Tomato Research Institute Meeting. 25 participants. 12/3/20.
31. **'Irrigation of Pistachio: System Selection, Maintenance, and Evaluation'**, Presenter, University of California Agriculture and Natural Resources Advances in Pistachio Production. 170 participants. 11/5/20.
30. **'Sensing Crop Water Stress with Thermal Imagery'**, Presenter. University of California Agriculture and Natural Resources Drone Camp 2020. 80 participants. 6/25/20.
29. **'Drone Imagery Processing with Agisoft Metashape'**, Presenter. University of California Agriculture and Natural Resources Drone Camp 2020. 118 participants. 6/24/20.
28. **'California Irrigation Decision Support Systems'**, Presenter for Government, Industry, Growers, and Extension Advisors. Remote. 15 participants. 6/15/20.

27. **'Conservation Irrigation Lab Introduction'**, Presenter. Water Program Team. University of California Agriculture and Natural Resources, Davis, CA. 3/12/20.

26. **'Silver Solutions: Irrigation Strategies' Water Program Team Webinar Series'**. University of California Agriculture and Natural Resources, 3/10/20.

25. **'Drone imagery processing using Agisoft Metashape: single-workstation and high-performance computing cluster applications'** Presenter. #Maptimedavis Workshop Series. 25 participants. 2/26/20.

24. **'Using drones for water and N management in the Central Sands'**, Presenter. Wisconsin Potato and Vegetable Growers Association and University of Wisconsin Extension Grower Education Conference. 80 participants. 2/5/20.

23. **'Soil-plant-water relations, irrigation, and salinity management in a changing CA climate'**, Presenter. FNRI Fruit and Nut Crop Research Coordination, 1/14/20.

22. **'Soil-Plant-Water Relations and Evapotranspiration'**, Presenter. Castro Valley Master Gardener Continuing Education Event. 52 participants. 1/7/20.

## **2019**

21. **'How do different soil types impact physiology, yield, and quality under late-season deficit irrigation?'**, Presenter. California Tomato Research Institute Meeting. 40 participants. 12/5/19.

20. **'Soil-plant-water relations, irrigation, and salinity management in a changing CA climate'**, Presenter. Wonderful Orchards Research Leadership Team. 11/18/19.

19. **'ET and Water Productivity'**, Presenter. Managing Irrigation to Optimize Water Use Learning Video Module. Wisconsin Water Stewards Certification Course. Filmed in Madison, WI. 6/21/19.

18. **'Gardening 101'**, Presenter. Wausau WI Urban Community Gardens. With Language Access in Hmong. 3/29/19.

17. **'Plant Love Stories Live'** Co-Host and Moderator w/Dr. Rebecca Barak. Wild Things Conference. Rosemont, IL. 2/23/19.

16. **'High Capacity Wells and Ground Water'**, Presenter. Science on Tap. Minocqua, WI. >75 participants. 2/5/19. ([link](#)).

## **2018**

15. **'Proximal and remote sensing of evapotranspiration'**, Presenter. Wisconsin Potato and Vegetable Growers Groundwater Task Force Meeting. 7/30/18.

14. **'Using unmanned aerial vehicles (UAVs) for variable rate soil and water management in the Wisconsin Central Sands'**, Presenter. Wisconsin Potato and Vegetable Growers Groundwater Task Force Meeting. 11/15/18.
13. **'The Wisconsin Central Sands Ecosystem'**, Presenter. Leadership Wisconsin Local Government Fellows Program. 2/22/18.
12. **'How well do EC maps represent soil properties in the Central Sands?'**, Presenter. Wisconsin Potato and Vegetable Growers Association and University of Wisconsin Extension Grower Education Conference. 2/6/18.
11. **'Plant Love Stories Live'**, Co-host and Moderator w/Dr. Rebecca Barak. North American Congress for Conservation Biology. Toronto, Canada. 7/23/18.
10. **'Gardening 101'**, Presenter. Wausau WI Urban Community Gardens. With Language Access in Hmong. 2018.
9. **'United States Congressional Visits'** Policy-oriented research with Sen. Tammy Baldwin (WI) and senior agricultural advisors for Sen. Ron Johnson (WI), Sen. Amy Klobuchar (MN), Sen. Tina Smith (MN), Rep. Colin Peterson (MN), Rep. Rick Nolan (MN), Rep. Ron Kind (WI), and Rep. Sean Duff (WI). Washington D.C.

***2017 and prior***

8. **'Drivers of potential recharge from irrigated agroecosystems in the Wisconsin Central Sands'**, Presenter. Wisconsin Potato and Vegetable Growers Groundwater Task Force Meeting. 2017.
7. **'Estimating Evapotranspiration (ET) at different spatiotemporal scales'**, Presenter. Wisconsin Potato and Vegetable Growers Association and University of Wisconsin Extension Grower Education Conference. 2017.
6. **'Water scarcity amidst abundance: A call for adaptive strategies to manage freshwaters, forests, and irrigated agroecosystems throughout sandy aquifers in the northern Great Lake States'** Presenter. Wisconsin Potato and Vegetable Growers Groundwater Task Force Meeting. 2016.
5. **'ET and potential recharge in different Central Sands crops'**, Presenter. Wisconsin Potato and Vegetable Growers Association and University of Wisconsin Extension Grower Education Conference. 2016.
4. **'Building water-energy budgets for groundwater management in the Wisconsin Central Sands'** Presenter. Wisconsin Potato and Vegetable Growers Groundwater Task Force Meeting. 2015.
3. **'Field-based approach to understand dynamic water cycles and climate in the Central Sands'** Presenter with CJ Kucharik. Wisconsin Potato and Vegetable Growers Association and University of Wisconsin Extension Grower Education Conference. 2014.

2. **'Irrigation Water Management and Crop Gas Exchange'**, Presenter. Wisconsin Farm Technology Days. 2014.

1. **'Healthy Food from Heathy Soils'** Madison WI Children's Museum. 2011.

## **EXTENSION BROADCAST, PRINT, & MEDIA PRODUCTS**

#mentee/advisee

### **2024**

78. **'Water Stress: Tools and sensors can help with this pressing issue'** National Nut Grower. Great American Media Services. Interview conducted by Keith Loria. Spring 2024. ([link](#))

77. **'Climate change and agriculture: water'**, American Association for the Advancement of Science (AAAS) SciLine Media Downloadable Briefing, Transcript, and Press product. 4/9/24. ([link](#))

### **2023**

76. **'Water Advocacy and Implementation'** Water Talk Podcast. Episode 54 w/Laurel Firestone. Co-host and producer with Drs. Faith Kearns and Sam Sandoval. 6/2/23. ([link](#))

75. **'Sierra Snowpack'** Water Talk Podcast. Episode 53 w/Dr. Safeeq Khan. Co-host and producer with Drs. Faith Kearns and Sam Sandoval. 5/19/23. ([link](#))

74. **'Water Sovereignty and Artistry'** Water Talk Podcast. Episode 52 w/Dr. Brittani Orona. Co-host and producer with Drs. Faith Kearns and Sam Sandoval. 5/12/23. ([link](#))

73. **'Rural Socio-hydrology'** Water Talk Podcast. Episode 51 w/Daniel O'Connell. Co-host and producer with Drs. Faith Kearns and Sam Sandoval. 5/5/23. ([link](#))

72. **'Comparative Water Politics'** Water Talk Podcast. Episode 50 w/Dr. Sharon Megdal. Co-host and producer with Drs. Faith Kearns and Sam Sandoval. 4/28/23. ([link](#))

71. **'The Water We Eat: Tackling the Groundwater Dilemma'**. Interview on the Unfold Podcast. 4/25/23. ([link](#))

70. **'David Mas Masumoto'** Water Talk Podcast. Episode 49 w/David 'Mas' Masumoto. Co-host and producer with Drs. Faith Kearns and Sam Sandoval. 4/21/23. ([link](#))

69. **'The Salton Sea(s)'** Water Talk Podcast. Episode 48 w/Dr. Traci Brynne Voyles. Co-host and producer with Drs. Faith Kearns and Sam Sandoval. 4/14/23. ([link](#))

68. **'How managing flood flows can help rescue aquifers'**. AgNet Commentary written by Thomas Harter, Mallika Nocco, Isaya Kisekka and Helen Dahlke. 4/12/23. ([link](#))

67. **'Regulating Nitrogen'** Water Talk Podcast. Episode 47 w/Claire Bjork. Co-host and producer with Drs. Faith Kearns and Sam Sandoval. 4/7/23. ([link](#))

66. **'Environmental Justice in the San Joaquin Valley'** Water Talk Podcast. Episode 46 w/Nayamin Martinez. Co-host and producer with Drs. Faith Kearns and Sam Sandoval. 3/24/23. ([link](#))

65. **'Atmospheric Rivers'** Water Talk Podcast. Episode 45 w/Drs. Katerina Gonzales and Daniel Swain. Co-host and producer with Drs. Faith Kearns and Sam Sandoval. 3/17/23. ([link](#))

64. **'Water Insecurity and Circularity'** Water Talk Podcast. Episode 44 w/Dr. Greg Pierce. Co-host and producer with Drs. Faith Kearns and Sam Sandoval. 3/10/23. ([link](#))

63. **'Educating & Empowering Elected Officials'** Water Talk Podcast. Episode 43 w/Leticia Gonzales and Victor Griego. Co-host and producer with Drs. Faith Kearns and Sam Sandoval. 3/3/23. ([link](#))

62. **'Regenerative Viticulture'** Water Talk Podcast. Episode 42 w/Dr. Chris Chen. Co-host and producer with Drs. Faith Kearns and Sam Sandoval. 2/24/23. ([link](#))

61. **'Dam, History!'** Water Talk Podcast. Episode 41 w/Varsha Venkatasubramanian. Co-host and producer with Drs. Faith Kearns and Sam Sandoval. 2/17/23. ([link](#))

60. **'Whiplash & Reflection'** Water Talk Podcast. Episode 40 w/. Co-host and producer with Drs. Faith Kearns and Sam Sandoval. 2/10/23. ([link](#))

59. **'Using remote sensing to understand tree water status'**. AgNet Interview with Patrick Cavanaugh, The Tree Nut Report. 2/1/23. ([link](#))

## 2022

58. **'Slow Water Movements'** Water Talk Podcast. Episode 39 w/Erica Gies. Co-host and producer with Drs. Faith Kearns and Sam Sandoval. Eds: Victoria Roberts<sup>#</sup> and Paloma Herrera-Thomas<sup>#</sup>. 5/6/22. ([link](#))

57. **'Ag in the Delta'** Water Talk Podcast. Episode 38 w/Dr. Michelle Leinfelder-Miles. Co-host and producer with Drs. Faith Kearns and Sam Sandoval. Eds: Victoria Roberts<sup>#</sup> and Paloma Herrera-Thomas<sup>#</sup>. 4/29/22. ([link](#))

56. **'Water journalism and information flows'** Water Talk Podcast. Episode 37 w/Ian James. Co-host and producer with Drs. Faith Kearns and Sam Sandoval. Eds: Victoria Roberts<sup>#</sup> and Paloma Herrera-Thomas<sup>#</sup>. 4/22/22. ([link](#))

55. **'Central Coast Wine and Water'** Water Talk Podcast. Episode 36 w/Mark Battany. Co-host and producer with Drs. Faith Kearns and Sam Sandoval. Eds: Victoria Roberts<sup>#</sup> and Paloma Herrera-Thomas<sup>#</sup>. 4/15/22. ([link](#))
54. **'Disasters and Climate Justice'** Water Talk Podcast. Episode 35 w/Dr. Michael Méndez. Co-host and producer with Drs. Faith Kearns and Sam Sandoval. Eds: Victoria Roberts<sup>#</sup> and Paloma Herrera-Thomas<sup>#</sup>. 4/8/22. ([link](#))
53. **'CA Native Water Rights, Stewardship, & Protection'** Water Talk Podcast. Episode 34 w/Dr. Beth Rose Middleton Manning. Co-host and producer with Drs. Faith Kearns and Sam Sandoval. Eds: Victoria Roberts<sup>#</sup> and Paloma Herrera-Thomas<sup>#</sup>. 4/1/22. ([link](#))
52. **'Pacific Kelp Forests'** Water Talk Podcast. Episode 33 w/Dr. Arturo Ramírez-Valdez. Co-host and producer with Drs. Faith Kearns and Sam Sandoval. Eds: Victoria Roberts<sup>#</sup> and Paloma Herrera-Thomas<sup>#</sup>. 3/18/22. ([link](#))
51. **'Water inheritance and futures'** Water Talk Podcast. Episode 32 w/Joaquin Esquivel (State Water Resources Control Board). Co-host and producer with Drs. Faith Kearns and Sam Sandoval. Eds: Victoria Roberts<sup>#</sup> and Paloma Herrera-Thomas<sup>#</sup>. 3/11/22. ([link](#))
50. **'Cover Crop Hydro-economics'** Water Talk Podcast. Episode 31 w/Drs. Alyssa DeVincentis and Ellen Bruno. Co-host and producer with Drs. Faith Kearns and Sam Sandoval. Eds: Victoria Roberts<sup>#</sup> and Paloma Herrera-Thomas<sup>#</sup>. 3/4/22. ([link](#))
49. **'Soil, Political Ecology, and Water'** Water Talk Podcast. Episode 30 w/Dr. Asmeret Asefaw Berhe. Co-host and producer with Drs. Faith Kearns and Sam Sandoval. Eds: Victoria Roberts<sup>#</sup> and Paloma Herrera-Thomas<sup>#</sup>. 2/25/22. ([link](#))
48. **'Functional Environmental Flows'** Water Talk Podcast. Episode 29 w/Drs. Belize Lane and Marissa Escobar. Co-host and producer with Drs. Faith Kearns and Sam Sandoval. Eds: Victoria Roberts<sup>#</sup> and Paloma Herrera-Thomas<sup>#</sup>. 2/18/22. ([link](#))
47. **'Recommended Reading: Mallika A. Nocco, Mentorship, equity, and research productivity: lessons from a pandemic'**, For Your Information: News & Updates from the Office of the Vice Chancellor for Diversity, Equity, and Inclusion. 2/18/21. ([link](#))
46. **'Getting to the Heart of Water Communication'** Water Talk Podcast. Episode 28 w/Faith Kearns. Co-host and producer with Drs. Faith Kearns and Sam Sandoval. Eds: Victoria Roberts<sup>#</sup> and Paloma Herrera-Thomas<sup>#</sup>. 2/11/22. ([link](#))
45. **'Season 3 Teaser'** Water Talk Podcast. Episode 27. Co-host and producer with Drs. Faith Kearns and Sam Sandoval. Eds: Victoria Roberts<sup>#</sup> and Paloma Herrera-Thomas<sup>#</sup>. 2/4/22.

44. **'Closing the gap'** National Nut Grower. Great American Media Services. Written with Crystal Nay. Winter 2022. ([link](#))

## 2021

43. **'Water Wizards will reach out to Bay Area kids'**. Interview with Pamela Kan-Rice. University of California Cooperative Extension Healthy Communities Blog. 11/29/21. ([link](#))

42. **'Growing Food During a Drought'** Bay Area Bountiful: Drought—Science & Human Impacts. Northern California Public Media. Interviewed by Producer/Videographer/Editor: Chelsea Wood. 9/10/21. ([link](#))

41. **'Water Diplomacy and Dialogue'** Water Talk Podcast. Episode 26 w/Felicia Marcus. Co-host and producer with Drs. Faith Kearns and Sam Sandoval. Eds: Victoria Roberts<sup>#</sup> and Claire Bjork<sup>#</sup>. 6/25/21. ([link](#))

40. **'Drought: University of California Agriculture and Natural Resources Facebook Live'**. Moderator and panelist with Drs. Faith Kearns and Samuel Sandoval. 6/21/21. ([link](#))

39. **'Drought and "Ecosystem" Management'** Water Talk Podcast. Episode 25 w/Felicia Marcus. Co-host and producer with Drs. Faith Kearns and Sam Sandoval. Eds: Victoria Roberts<sup>#</sup> and Claire Bjork<sup>#</sup>. 6/18/21. ([link](#))

38. **'Drought and disease in the Sierra'** Water Talk Podcast. Episode 24 w/Dr. Joan Dudney. Co-host and producer with Drs. Faith Kearns and Sam Sandoval. Eds: Victoria Roberts<sup>#</sup> and Claire Bjork<sup>#</sup>. 6/11/21. ([link](#))

37. **'Advancing water justice in underserved communities'** Water Talk Podcast. Episode 23 w/Drs. Angel Fernandez-Bou & Jose Pablo Ortiz Partida. Co-host and producer with Drs. Faith Kearns and Sam Sandoval. Eds: Victoria Roberts<sup>#</sup> and Claire Bjork<sup>#</sup>. 6/4/21. ([link](#))

36. **'North Coast Wine and Water'** Water Talk Podcast. Episode 22 w/Glenn McGourty. Co-host and producer with Drs. Faith Kearns and Sam Sandoval. Eds: Victoria Roberts<sup>#</sup> and Claire Bjork<sup>#</sup>. 5/28/21. ([link](#))

35. **'Watering Urban Green Spaces'** Water Talk Podcast. Episode 21 w/Janet Hartin and Dr. Amir Haghverdhi. Co-host and producer with Drs. Faith Kearns and Sam Sandoval. Eds: Victoria Roberts<sup>#</sup> and Claire Bjork<sup>#</sup>. 5/21/21. ([link](#))

34. **'Decolonizing Water Part 2'** Water Talk Podcast. Episode 20 w/Dr. Cutcha Risling Baldy. Co-host and producer with Drs. Faith Kearns and Sam Sandoval. Eds: Victoria Roberts<sup>#</sup> and Claire Bjork<sup>#</sup>. 5/14/21. ([link](#))

33. **'Module 1: Environmental Impacts of Nitrogen Losses'** University of California Agriculture and Natural Resources Nitrogen Course. 5/10/21. ([registration link](#))

32. **'UC Drought Management Resources for almond, prune, walnut, and olive orchards'** Sacramento Valley Orchard Source. University of California Agriculture and Natural Resources. 5/13/21. ([link](#))



31. **'Decolonizing Water Part 1'** Water Talk Podcast. Episode 19 w/Dr. Cutcha Risling Baldy. Co-host and producer with Drs. Faith Kearns and Sam Sandoval. Eds: Victoria Roberts<sup>#</sup> and Claire Bjork<sup>#</sup>. 5/7/21. ([link](#))

30. **'California Urban Water 101'** Water Talk Podcast. Episode 18 w/Dr. Erik Porse. Co-host and producer with Drs. Faith Kearns and Sam Sandoval. Eds: Victoria Roberts<sup>#</sup> and Claire Bjork<sup>#</sup>. 4/30/21. ([link](#))

29. **'The Human Right to Drinking Water & SGMA'** Water Talk Podcast. Episode 17 w/Darcy Bostic and Dr. Kristin Dobbin. Co-host and producer with Drs. Faith Kearns and Sam Sandoval. Eds: Victoria Roberts<sup>#</sup> and Claire Bjork<sup>#</sup>. 4/23/21. ([link](#))

28. **'Agriculture in the California Borderlands'** Water Talk Podcast. Episode 16 w/Dr. Jairo Diaz. Co-host and producer with Drs. Faith Kearns and Sam Sandoval. Eds: Victoria Roberts<sup>#</sup> and Claire Bjork<sup>#</sup>. 4/16/21. ([link](#))

27. **'With drought looming, growers find welcome upsides to deficit irrigation'** Ceres Aerial Imagery Blog. Interview conducted by Crystal Nay. 4/13/21. ([link](#))

26. **'Wild Horses and Water in California'** Water Talk Podcast. Episode 15 w/Laura Snell. Co-host and producer with Drs. Faith Kearns and Sam Sandoval. Eds: Victoria Roberts<sup>#</sup> and Claire Bjork<sup>#</sup>. 4/9/21. ([link](#))

25. **'California Peaches and Water'** Water Talk Podcast. Episode 14 w/David Mas Masumoto. Co-host and producer with Drs. Faith Kearns and Sam Sandoval. Eds: Victoria Roberts<sup>#</sup> and Claire Bjork<sup>#</sup>. 4/2/21. ([link](#))

24. **'Understanding the principles of irrigation efficiency in pistachio'** National Nut Grower. Great American Media Services. Interview conducted by Crystal Nay. Winter 2021. ([link](#))

23. **'Regenerative Irrigation'** The Soil Health Connection. Interview conducted by Sarah Light and Liz Harper. 1/28/21. ([link](#))

## 2020

22. **'Silver Solutions Webinar Series-Complementary strategies to address California water challenges'** University of California Agriculture and Natural Resources Water Program Team. Co-organizer and moderator with Dr. Sam Sandoval. 9/28/20. ([playlist link](#)).

21. **'Water Reform in California Institutional Ecosystems'** Water Talk Podcast. Episode 12 w/Drs. Linda Estelí Méndez Barrientos and Jess Rudnick. Co-host and producer with Drs. Faith Kearns and Sam Sandoval. 7/10/20. ([link](#))

20. **'Rivers in the California Sky'** Water Talk Podcast. Episode 11 w/Drs. Katerina Gonzales and Daniel Swain. Co-host and producer with Drs. Faith Kearns and Sam Sandoval. 6/30/20. ([link](#))

19. **'California Water Policy and Extension'** Water Talk Podcast. Episode 10 w/Dr. Doug Parker. Co-host and producer with Drs. Faith Kearns and Sam Sandoval. 6/26/20. ([link](#))

18. **'Small Farms and Water in California'** Water Talk Podcast. Episode 9 w/Dr. Ruth Dahlquist-Willard. Co-host and producer with Drs. Faith Kearns and Sam Sandoval. 6/19/20. ([link](#))

17. **'Indigenous Water and Fire Expertise in California'** Water Talk Podcast. Episode 8 w/Dr. Don Hankins. Co-host and producer with Drs. Faith Kearns and Sam Sandoval. 6/12/20. ([link](#))

16. **'Beaver hydrology and Management'** Water Talk Podcast. Episode 7 w/Dr. Emily Fairfax. Co-host and producer with Drs. Faith Kearns and Sam Sandoval. 6/4/20. ([link](#))

15. **'California Water Law 101'** Water Talk Podcast. Episode 6 w/Dr. Karrigan Börk. Co-host and producer with Drs. Faith Kearns and Sam Sandoval. 5/23/20. ([link](#))

14. **'California Gardening: Past, Present, Future'** Water Talk Podcast. Episode 5 w/Drs. Rachel Surls and Rose Hayden-Smith. Co-host and producer with Drs. Faith Kearns and Sam Sandoval. 5/16/20. ([link](#))

13. **'Youth and Water in California Cities'** Water Talk Podcast. Episode 4 w/Claudia Diaz Carrasco and Marianne Bird. Co-host and producer with Drs. Faith Kearns and Sam Sandoval. 5/9/20. ([link](#))

12. **'The Food-Water-Virus Nexus'** Water Talk Podcast. Episode 3 w/Dr. Erin DiCaprio. Co-host and producer with Drs. Faith Kearns and Sam Sandoval. 4/30/20. ([link](#))

11. **'Ranching and Water in California'** Water Talk Podcast. Episode 2 w/Dan Macon and Dr. Leslie Roche. Co-host and producer with Drs. Faith Kearns and Sam Sandoval. 4/24/20. ([link](#))

10. **'Pilot Episode'** Water Talk Podcast. Episode 1. Co-host and producer with Drs. Faith Kearns and Sam Sandoval. 4/21/20. ([link](#))

### ***2019 and prior***

9. **'Can Drones Aid in Water & Nitrogen Management?'** Badger Common'Tater. 8/13/19. Pages 16-18. ([link](#))

8. **'Irrigated Farms in Central Sands Region Linked to Cooler Temperature'** Wisconsin Public Radio. Mary Kate McCoy. 7/4/19. ([link](#))

7. **'Irrigated farming in Wisconsin's Central Sands cool the region's climate'** University of Wisconsin News. Eric Hamilton. 7/2/19. ([link](#))

6. **'Wisconsin Waters and Irrigated Agriculture Science on Tap Wednesday'** Wisconsin Public Radio. Ken Krall. 2/5/19. ([link](#))

5. **'UW Project Asks: What happens to irrigation water in Wisconsin's Central Sands?'** University of Wisconsin News. David Tenenbaum. 5/28/18. ([link](#))

4. **'Irrigated Agricultural Impacts on Water Quantity in Humid Regions'** Crop, Soils, and Agronomy (CSA) News Magazine. 11/3/17. ([link](#))
3. **'Irrigation and Climate Impacts to the Water-Energy Balance of the WI Central Sands'** Environmental Biophysics: Measuring and Modeling the Environment. Interviewed by Colin Campbell. 2/17/16. ([link](#))
2. **'C.B. Tanner at Hancock Agricultural Station: Building the experimental foundation for modern environmental biophysics'** Hancock Agricultural Research Station 100<sup>th</sup> Anniversary. 7/28/2016.
1. **'Plants, Water, and Landscapes'**. Wisconsin Potato and Vegetable Growers Association News. Author. 3/31/15. ([link](#))

### **INVITED SEMINARS, LECTURES, & PRESENTATIONS**

\*guest teaching in undergraduate or graduate course

47. **'Transformative Extension'**. USDA Agricultural Water Center Symposium. Arizona State University. Southwest Groundwater and Sustainable Agricultural Systems 2<sup>nd</sup> Annual Symposium. Tempe, AZ. 1/16/24.
46. **'Perspectives from the field: key factors in irrigation management'**. Observed/empirical irrigation demand and use. Irrigation in the Earth System Workshop. Aspen Global Change Institute. Aspen, CO. 6/7/23.
45. **'Drones and photogrammetry'**\* Environmental Monitoring Guest Lecture. University of California, Davis. 5/17/23.
44. **'No Water, No Food: Satellites Transforming Water Management'**. Presenter and Panelist. AIM for Climate Summit. Washington D.C. 5/8/23
43. **'Irrigation and conservation in a changing climate'** Universities Council on Water Resources (UCOWR) Annual Virtual Lecture. Virtual. 4/26/23.
42. **'Climate resilient agricultural water management'**. Biological Systems Engineering Seminar. University of Wisconsin—Madison. Madison, WI. 4/14/23.
41. **'Extending imagery to integrated decision support'**. Tree Remote Sensing of Evapotranspiration Experiment Annual Meeting. Sustainable Agricultural Water Systems Research Unit. USDA-ARS. Davis, CA. 3/1/23.
40. **'Exploring almond, water, and climate linkages with the Tree Remote sensing of Evapotranspiration eXperiment (T-REX)'** American Geophysical Union Fall Meeting. Invited Presentation. Chicago, IL. 12/14/22.

39. **'Increasing specialty crop resilience to drought, heat, and floods'** Department of Earth and Environmental Science Seminar. Michigan State University. East Lansing, MI. 12/9/22.
38. **'Irrigating specialty crop systems for drought and flood resilience'** Interdisciplinary Plant Group Symposium. University of Missouri. Invited Presentation. Columbia, MO. 5/26/22
38. **'Managing water for multiple benefits'**\* Sustainable Agroecosystem Management Guest Lecture. University of California, Davis. 5/16/22.
37. **'Drones and photogrammetry'**\* Environmental Monitoring Guest Lecture. University of California, Davis. 5/4/22.
36. **'Decision support for precision, deficit, and regenerative water management'** Plants, Soils, and Climate Departmental Seminar. Utah State University. 11/15/21.
35. **'Precision Agriculture and Conservation Irrigation'**. Transformative Practices Session. Yolo Food Bank Food for Fairness Summit. Invited Oral Presentation and Panel. 10/21/21.
34. **'California agriculture in a changing climate'**\* Mandela Washington Fellowship Seminar. University of California, Davis. 5/18/21.
33. **'Managing water for multiple benefits'**\* Sustainable Agroecosystem Management Guest Lecture. University of California, Davis. 5/17/21.
32. **'Drones and photogrammetry'**\* Environmental Monitoring Guest Lecture. University of California, Davis. 5/12/21.
31. **'California Agriculture'**\* Water, Power, and Society Guest Lecture. University of California, Davis. 5/12/21.
30. **'Informing irrigation and encouraging inclusion with plants'**\* Biology Colloquium. California State University-Stanislaus. 3/12/21.
29. **'Informing irrigation and encouraging inclusion with plants'** Plant Sciences Seminar. University of California, Davis. 2/17/21.
28. **'Introduction to Scientific Literature, Publishing, and Podcasting'**\* Plant-Animal Interactions Guest Lecture. University of Michigan, Flint. 1/21/21.
27. **'California Research and Extension with the Water Talk Podcast: Expertise, reflection, and best practices'**, American Geophysical Union Fall Meeting. Oral Presentation. 12/11/20
26. **'Irrigated land use, praxis, and extension'** Hydrologic Sciences Graduate Group Research Seminar. University of California, Davis. 11/19/20.

25. **'Sensing crop water stress with drones'**\* Friday Regular Open Graduate Seminar in Plant Sciences. University of California, Davis. 10/23/20.
24. **'Equity, mentorship, and research productivity during the coronavirus pandemic and beyond'**\* Justice, Equity, Diversity, and Inclusion in LAWR and Beyond Seminar. University of California, Davis. 10/21/20.
23. **'Drones and photogrammetry'**\* Environmental Monitoring Guest Lecture. University of California, Davis. 5/20/20.
22. **'How can we meet crop demand and build healthy soils in an increasingly water scarce climate?'**\* Foundations of Soils and Biogeochemistry Seminar. University of California, Davis. 1/23/20.
21. **'Feedbacks between irrigation and climate from field to regional scales in the Midwest US'**, American Geophysical Union Fall Meeting. Invited Oral Presentation. San Francisco, CA. 12/10/19
20. **'New russet burbank, gold russet, and sweet corn plant functional types and PEST cal/val'** Agro-IBIS 12<sup>th</sup> Annual Agroecosystem Modeling Workshop in St. Paul, MN. 4/11/19.
19. **'Sustainable water use in agriculture – water quantity in Wisconsin'**\* A Growing Dilemma: The Future of Food Guest Lecture. University of Wisconsin-Madison. 2/28/19.
18. **'Irrigation impacts to water quantity in the Northern Great Lake states'** Department of Soil, Water, and Climate Fall Seminar Series. University of Minnesota—Twin Cities. 10/31/18.
17. **'Improving irrigation efficiency and outcomes'** Integrated Topics in Land and Atmospheric Science, University of Minnesota—Twin Cities. 10/31/18.
16. **'Tackling irrigation management under sustained water scarcity'** Department of Land, Air, and Water Resources Seminar. University of California, Davis. 6/14/18.
15. **'An Interdisciplinary Breakdown of the Wisconsin Central Sands Water Conflict'** Weston Roundtable Lecture Series. Center for Sustainability and the Global Environment. University of Wisconsin-Madison. 4/12/18. ([link](#)).
14. **'Evapotranspiration'**\* Principles of Soil and Water Management Guest Lecture. University of Wisconsin-Madison. 4/12/18.
13. **'The Surface Energy Balance'**\* Principles of Soil and Water Management Guest Lecture. University of Wisconsin-Madison. 4/10/18.
12. **'Soil physics at the Wisconsin food-water-energy nexus'** Department of Soil Science Seminar. University of Wisconsin-Madison. 11/13/17.

11. **'Biophysical impacts of irrigated agriculture on water and energy cycles in the Wisconsin Central Sands'** Energy Institute Dissertation Seminar. University of Wisconsin-Madison. 7/12/17.
10. **'Land and Water Conflict in Wisconsin: Central Sands Case Study'** Land and Water Conflict in Agriculture Seminar. University of Wisconsin-Madison. 9/14/17.
9. **'Water scarcity amidst abundance: A call for adaptive strategies to manage freshwaters, forests, and irrigated agroecosystems throughout sandy aquifers in the northern Great Lake States'** David H. Smith Conservation Fellowship Retreat. 4/10/17.
8. **'Water resource management in the Wisconsin Central Sands: Opportunities and Challenges'**\* Soil: Ecosystem and Resource Guest Lecture. University of Wisconsin-Madison. 4/4/17.
7. **'Photosynthesis Measurement and Modeling'**\* Environmental Biophysics Guest Lecture. University of Wisconsin-Madison. 11/29/16.
6. **'Evapotranspiration Measurement and Modeling'**\* Environmental Biophysics Guest Lecture. University of Wisconsin-Madison. 11/22/16.
5. **'Field studies to support and challenge water resource management'**\* Agroecosystems and Global Change Guest Lecture. University of Wisconsin-Madison. 11/12/15.
4. **'Leaf Gas Exchange Measurements'**\* Environmental Biophysics Guest Lecture. University of Wisconsin-Madison. 12/2/14.
3. **'Evaluating regional water scarcity: Irrigated crop water budgets for groundwater management in the Wisconsin Central Sands'** American Geophysical Union Fall Meeting. Oral Presentation. San Francisco, CA. 12/11/13.
2. **'Developing a framework for managing water scarcity in the Wisconsin Central Sands'**\* Agroecosystems and Global Change Guest Lecture. University of Wisconsin-Madison. 11/21/13.
1. **'Soil biology and the rhizosphere'**\* Soil: Ecosystem and Resource Guest Lecture. University of Wisconsin-Madison. 4/11/11.

## CONFERENCE ABSTRACTS AND POSTERS

#mentee/advisee

**2023**

50. S Solis<sup>#</sup>, AJ Gal<sup>#</sup>, E Edwards<sup>#</sup>, NE Bambach, KR Knipper, A Torres-Rua, S Castro, I Wright, P Tolentino, AJ McElrone, WP Kustas, **MA Nocco**. Mapping high-resolution actual evapotranspiration in almonds over an

eddy covariance flux footprint using remotely piloted aircraft. International Geoscience and Remote Sensing Symposium.

49. KM Fenn<sup>#</sup>, J Garcia<sup>#</sup>, C Lazcano, **MA Nocco**. Understanding the role of the soil microbiome on soil health in a young almond orchard. 3<sup>rd</sup> Global Soil Biodiversity Congress.

48. J Garcia<sup>#</sup>, C Wong, KM Fenn<sup>#</sup>, L Robles, N Gonzalez-Maldonado<sup>#</sup>, B Vaz, C Lazcano, **MA Nocco**. Assessing relationships between microbial communities and soil carbon across depths in perennial cropping systems. 3<sup>rd</sup> Global Soil Biodiversity Congress.

47. KR Knipper, NE Bambach, AJ McElrone, **MA Nocco**, A Torres-Rua, WP Kustas, MC Anderson, S Saa. The Tree-Crop Remote Sensing of Evapotranspiration Experiment (T-REX): A Scientific-Based Path for Sustainable Water Management and Climate Mitigation. 103<sup>rd</sup> Annual meeting of the American Meteorological Society.

## 2022

46. LA Ebert<sup>#</sup>, T Turini, AJ Gal<sup>#</sup>, CM Emerson<sup>#</sup>, D Diaz<sup>#</sup>, G Jha, C Lazcano, AM Gaudin, K Scow, **MA Nocco**. 'Evaluating the Impacts of Deficit Irrigation on Processing Tomatoes with Remote Sensing'. American Geophysical Union Fall Meeting.

45. E Edwards<sup>#</sup>, C Reyes, AJ Gal<sup>#</sup>, J Thomas, JF Knowles, CYS Wong, L Milliron, T Magney, **MA Nocco**. 'Remote Sensing of Water Status in Perennial Agroecosystems with Hyperspectral, Thermal, and SIF Imagery'. American Geophysical Union Fall Meeting.

44. KM Fenn<sup>#</sup>, AJ Gal<sup>#</sup>, W Wallace, C Lazcano, A DeVincentis, J Borum, JT Bushoven, E Edwards<sup>#</sup>, G Jha, SD Khalsa, AJ McElrone, S Sandoval Solis, D Yeasmin, **MA Nocco**. 'Intrafield Variability of Soil Health Indicators After Whole Orchard Recycling.' American Geophysical Union Fall Meeting.

43. AJ Gal<sup>#</sup>, NE Bambach, AJ McElrone, LA Ebert<sup>#</sup>, N Raab, SB Bagshaw, SC Bustamante, K Knipper, N Dokoozlian, L Sanchez, WP Kustas, EJ Forrester and **MA Nocco**. 'Assessing Remotely-Sensed Vineyard Evapotranspiration Across Multiple Scales During Heatwaves'. American Geophysical Union Fall Meeting.

42. T Magney, CYS Wong, E Orcutt, F Ulep, E Edwards<sup>#</sup>, MR Caton, D McHugh, Z Pierrat, **MA Nocco**, U Seibt, AE Schuh, C Frankenberg, J Stutz. 'Potential and limitations of remote sensing metrics for tracking ecosystem photosynthesis: Insights from a network of tower spectrometers and aircraft data'. American Geophysical Union Fall Meeting.

41. **MA Nocco**, NE Bambach, AR Torres, K Knipper, T Magney, S Castro, N Daman, E Edwards<sup>#</sup>, A Gal<sup>#</sup>, A Hammermeister, R Nguyen, I Wright, P Tolentino, M Anderson, W Kustas, AJ McElrone. 'Exploring almond, water, and climate linkages with the Tree Remote sensing of Evapotranspiration eXperiment (T-REX)'. American Geophysical Union Fall Meeting.

40. DA Diaz<sup>#</sup>, LA Ebert<sup>#</sup>, G Jha, R Schmidt, **MA Nocco**. 'Vegetation Indices Predict Tomato Phenology'. American Society for Agronomy, Crop Science Society of America, Soil Science Society of America International Annual Meeting
39. N Gonzalez-Maldonado<sup>#</sup>, KL Steenwerth, **MA Nocco**, J Garcia<sup>#</sup>, E Yao, C Lazcano. 'Is Microbial Diversity Related to Soil Health? a Study in Mediterranean Vineyards'. American Society for Agronomy, Crop Science Society of America, Soil Science Society of America International Annual Meeting
38. EO McNamee<sup>#</sup>, CJ Kucharik, **MA Nocco**. 'Evaluating the Utility of Irrigation Scheduling in the Wisconsin Central Sands'. American Society for Agronomy, Crop Science Society of America, Soil Science Society of America International Annual Meeting
37. H Malal<sup>#</sup>, A Marrs, **MA Nocco**, C Lazcano, H Lakhtar. 'The Effect of Vermicompost and Inorganic Fertilizer on the Soil Microbial Community Under Salinity Stress Conditions: An Incubation Experiment'. American Society for Agronomy, Crop Science Society of America, Soil Science Society of America International Annual Meeting
36. EO McNamee<sup>#</sup>, **MA Nocco**, K Masarik, CJ Kucharik. 'Assessing the Potential for Precision Irrigation in Humid Environments with Sandy Soils'. American Society for Agronomy, Crop Science Society of America, Soil Science Society of America International Annual Meeting
35. FN Nazrul Shimim, M Page-Fortin, AJ Gal<sup>#</sup>, DA Diaz<sup>#</sup>, B Whitaker, **MA Nocco**, G Jha. 'Time-Series Prediction of Field-Scale Evapotranspiration Using High Resolution Mapping of Evapotranspiration (HRMET) and Geostatistical Interpolation Techniques'. American Society for Agronomy, Crop Science Society of America, Soil Science Society of America International Annual Meeting
34. IO Holzer<sup>#</sup>, **MA Nocco**, BZ Houlton. 'Water and plant regulation of enhanced olivine weathering in red clover mesocosms'. Goldschmidt Conference

## **2021**

33. H Berris<sup>#</sup>, K Suvocarev, S Sandoval Solis, **MA Nocco**. 'Hydrologic Impacts of Cover Crops in Sacramento Valley Rice Systems'. American Geophysical Union Fall Meeting.
32. AJ Gal<sup>#</sup>, N Bambach, E Forrestel, S Bagshaw, S Castro Bustamante, N Dokoozlian, LA Ebert<sup>#</sup>, W Kustas, AJ McElrone, N Raab, L Sanchez, I Wright, **MA Nocco**. Drone-Based Mapping of Evapotranspiration and Crop Water Stress in Vineyards during Heatwave Events. American Geophysical Union Fall Meeting.
31. N Bambach, S Castro Bustamante, AJ Gal<sup>#</sup>, K Shackel, **MA Nocco**, W Kustas, AJ McElrone. Comparison of Almond Tree Evapotranspiration and Stress Indices Derived From Surface Renewal, Eddy Covariance, Thermal Imagery, and Weighing Lysimetry. American Geophysical Union Fall Meeting



30. I Holzer<sup>#</sup>, **MA Nocco**, N Bingham, H Goertzen, BZ Houlton. Soil Carbon Sequestration from Enhanced Weathering During a Historic Drought Year. American Geophysical Union Fall Meeting.

29. AJ Gal<sup>#</sup>, LA Ebert<sup>#</sup>, T Turini, KM Scow, C Lazcano, AC Gaudin, G Jha<sup>#</sup>, CM Emerson<sup>#</sup>, **MA Nocco**. 'High-Resolution Evapotranspiration Modeling for Deficit Irrigation of Processing Tomatoes'. American Society for Agronomy, Crop Science Society of America, Soil Science Society of America International Annual Meeting

28. LA Ebert<sup>#</sup>, AJ Chisholm, J Prater, SC Zipper, AR Desai, **MA Nocco**. 'Evaluating Sources of Error for Mapping Evapotranspiration from Remotely Piloted Aircrafts'. American Society for Agronomy, Crop Science Society of America, Soil Science Society of America International Annual Meeting

27. G Jha<sup>#</sup>, D Sihi, B Dari, H Kaur, **MA Nocco**, AL Ulery, KA Lombard. 'Rapid Assessment of Soil Total Iron Using an Inexpensive Nix Pro Color Sensor'. American Society for Agronomy, Crop Science Society of America, Soil Science Society of America International Annual Meeting

26. N Gonzalez-Maldonado<sup>#</sup>, E Yao, A Alameda, **MA Nocco**, KL Steenwerth, C Lazcano. 'Growers' Perceptions of Soil Health for Wine Grape Production in Napa Valley'. American Society for Agronomy, Crop Science Society of America, Soil Science Society of America International Annual Meeting

25. N Gonzalez-Maldonado<sup>#</sup>, E Yao, **MA Nocco**, KL Steenwerth, A Alameda, L Robles, C Lazcano. 'Evaluating Important Soil Health Indicators for Winegrape Production in Napa Valley'. American Society for Agronomy, Crop Science Society of America, Soil Science Society of America International Annual Meeting

24. CM Emerson<sup>#</sup>, C Lazcano, N Gonzalez-Maldonado<sup>#</sup>, E Yao, R Schmidt, KM Scow, T Turini, **MA Nocco**. 'Microbial Communities and Nutrient Dynamics Under Salt and Water Stress in Processing Tomatoes'. American Society for Agronomy, Crop Science Society of America, Soil Science Society of America International Annual Meeting.

23. G Jha<sup>#</sup>, F Nicolas, R Schmidt, K Suvočarev, I Kisekka, KM Scow, **MA Nocco**. 'Irrigation Decision Support System (IDSS) for the Food-Water-Energy Nexus in California'. American Society for Agronomy, Crop Science Society of America, Soil Science Society of America International Annual Meeting.

22. S Costanzo<sup>#</sup>, I Holzer<sup>#</sup>, N Bingham, **MA Nocco**, BZ Houlton. 'Evaluating the Effects of Rock Dust, Compost, and Biochar on Agricultural Soil-Water Dynamics'. American Society for Agronomy, Crop Science Society of America, Soil Science Society of America International Annual Meeting.

## **2020**

21. **Nocco MA**, F Kearns, SS Solis. 2020. 'California Research and Extension with the Water Talk Podcast: Expertise, reflection, and best practices'. American Geophysical Union Fall Meeting.

20. K Suvocarev, HO Perry, J Clay, MR Mangan, S Yan, EC Ware, ME Lundy, **Nocco MA**, L Mathews, KT Paw U, B Linquist. 'Water use in non-irrigated cover crops for the benefit of nesting waterfowl in California Sacramento Valley'. American Geophysical Union Fall Meeting.

19. LA Ebert<sup>#</sup>, AJ Chisholm<sup>#</sup>, J Prater, SC Zipper, A Talib, AR Desai, **MA Nocco**. 'How high to fly? Evaluating different elevations for mapping evapotranspiration from remotely piloted aircrafts' American Geophysical Union Fall Meeting.

18. I Holzer<sup>#</sup>, N Bingham, BZ Houlton, **MA Nocco**. 'CO<sub>2</sub> Sequestration and Ion Transport from Enhanced Rock Weathering at a Northern California Cropland Site.' American Geophysical Union Fall Meeting.

## **2019**

17. **MA Nocco**, RA Smail, C Ester, CJ Kucharik 'Feedback between irrigation and climate from field to regional scales in the Midwest U.S' American Geophysical Union Fall Meeting. *Invited*

16. LA Ebert<sup>#</sup>, AJ Chisholm, J Prater, SC Zipper, A Talib, AR Desai, **MA Nocco**. 'Using remotely piloted aircrafts to evaluate potato water stress in Central Wisconsin' American Geophysical Union Fall Meeting.

15. EO McNamee<sup>#</sup>, **MA Nocco**, K Masarik, CJ Kucharik. 'Differences in Yield and Crop Growth Among Soil Apparent Electrical Conductivity-Based Management Zones for Precision Irrigation in the Wisconsin Central Sands'. American Society for Agronomy, Crop Science Society of America, Soil Science Society of America International Annual Meeting.

## **2018**

14. **MA Nocco**, EO McNamee, B Bohman, A Talib, CJ Rosen, AR Desai, CC Kern, CJ Kucharik, TE Twine. 'Pine to Potato Conversion Impacts to Groundwater Recharge in the Northern Great Lakes Region.' American Geophysical Union Fall Meeting.

13. EO McNamee, **MA Nocco**, K Masarik, CJ Kucharik. Evaluating Spatiotemporal Patterns of Yield, Crop Growth, Water Use, and Soil Moisture Among Soil Apparent Electrical Conductivity Zones for Precision Irrigation Applications. American Society for Agronomy, Crop Science Society of America, Soil Science Society of America International Annual Meeting.

12. **MA Nocco**, TE Twine, CJ Kucharik, RA Smail. 'Informing a voluntary agricultural water stewardship program in the Northern Great Lake states.' North American Congress for Conservation Biology.

11. **MA Nocco**, RA Smail, EO McNamee, M Fienen, CJ Kucharik, TE Twine. 'Crop rotational strategies to improve freshwater quantity and quality in the Wisconsin Central Sands.' American Water Resources Association WI Section Meeting.

## **2017**

10. **MA Nocco**, SC Zipper, EG Booth, MD Ruark, SP Loheide, CJ Kucharik. 'Combining high-resolution proximal and remote sensing to evaluate intrafield water use in irrigated crop rotations.' American Society for Agronomy, Crop Science Society of America, Soil Science Society of America International Annual Meeting.

9. **MA Nocco**, SC Zipper, EG Booth, CR Cummings, MD Ruark, SP Loheide, CJ Kucharik. 'High-resolution mapping of evapotranspiration and apparent electrical conductivity in the Wisconsin Central Sands: Could precision irrigation conserve groundwater?' American Water Resources Association WI Section Meeting.

## **2016**

8. **MA Nocco**, SC Zipper, SP Loheide, CJ Kucharik. 'Using high-resolution remote sensing, lysimetry, and big leaf modeling to infer crop water use in the Wisconsin Central Sands.' American Society for Agronomy, Crop Science Society of America, Soil Science Society of America International Annual Meeting. ***\*Best oral graduate student presentation.***

7. **MA Nocco**, MD Ruark, CJ Kucharik. 'Could precision irrigation conserve groundwater in the humid, sandy aquifers of the Northern Great Lake States.' American Society for Agronomy, Crop Science Society of America, Soil Science Society of America International Annual Meeting. ***\*Second place, graduate student poster competition.***

6. **MA Nocco**, CJ Kucharik. 'Comparison of ET and recharge under Wisconsin Central Sands cropping systems using lysimetry and the FAO Penman-Monteith model.' American Water Resources Association WI Section.

## **2015 and prior**

5. **MA Nocco**, CJ Kucharik, GJ Kraft, SP Loheide. 'Drivers of spatiotemporal variability in evapotranspiration and recharge from irrigated agroecosystems in the Wisconsin Central Sands.' American Society for Agronomy, Crop Science Society of America, Soil Science Society of America International Annual Meeting. ***\*First place, graduate student poster and oral competition (lightning).***

4. **MA Nocco**, CJ Kucharik. 'Historical reconstruction (1948-2007) of evaporative demand in the Wisconsin Central Sands and implications for irrigated agriculture.' 2015. American Water Resources Association WI Section.

3. **MA Nocco**, GJ Kraft, CJ Kucharik. 'Evaluating regional water scarcity: Irrigated crop water budgets for groundwater management in the Wisconsin Central Sands.' 2013. American Geophysical Union Fall Meeting.

2. **MA Nocco**, HAS Dolliver, NJ Balster. 2012. 'Vegetation type modifies the cycling and aromaticity of DOC and N in small-scale urban stormwater basins.' American Geophysical Union Fall Meeting.

1. **MA Nocco**, GJ Kraft, CJ Kucharik. 2012. 'Conceptual to quantitative frameworks for evaluating irrigation and groundwater impacts in the Northern Lake States.' 57<sup>th</sup> Annual Midwest Ground Water Conference in Minneapolis, MN.

### **ACADEMIC ADVISING AND MENTORSHIP**

**Postdoctoral researchers mentored at the University of California-Davis:** Dr. Gaurav Jha ('21, Kansas State University), Dr. Nall Moonilall, Dr. Joshua Garcia, Dr. Sangeeta Bansal ('22, UC-Merced)

**Graduate students advised at the University of California-Davis (program):** Logan Ebert (Hydrologic Sciences PhD '24), Courtney Emerson (Soils and Biogeochemistry MS '23), Erica Edwards (Hydrologic Sciences), Kelsey Fenn (Soils and Biogeochemistry), Andrew Gal (Soils and Biogeochemistry)

**Graduate students mentored at the University of California-Davis (program):**

Usama Al-Dughaishi (Hydrologic Sciences), Peter Savchik (BSE), Brandon Klever (International Agricultural Development), Justine Beaulieu (Plant Pathology), Kelley Drechsler (Hydrologic Sciences), Iris Holzer (Soils and Biogeochemistry), Noelymar Gonzalez-Maldonado (Soils and Biogeochemistry), Bill Rice (Hydrologic Sciences), Nazanin Akrami (Agricultural Chemistry), Omar Samara (Biological Systems Engineering), Helaine Berris (Hydrologic Sciences), Monica Quezada (International Agricultural Development)

**Undergraduate students mentored at the University of California-Davis (program):** Andrew Gal (Environmental Science & Management), Cassandra Bonfil (Hydrology), Claire Bjork (Environmental Policy & Planning), Victoria Roberts (Sustainable Agriculture & Food Systems; Native American Studies), Dawson Diaz (Plant Biology & Political Science), Sarah Costanzo (Environmental Science and Management), Paloma Herrera-Thomas (Environmental Science and Management), Sarah Solis (Hydrology), Guadalupe Tejeda (Plant & Soil Sciences—Chico State), Ivy Israel (Environmental Science and Management)

**Graduate students mentored at the University of Wisconsin-Madison (program):** Elizabeth McNamee (Agronomy Ph.D.), Ammara Talib (Civil and Environmental Engineering Ph.D.), Paige Leytem (Agroecology M.S. 2016)

**Undergraduate students mentored at the University of Wisconsin (major, institution):** Alex Chisholm (Soils and Land Management, Stevens Point), Logan Ebert (Mathematics and Hydrology, Stevens Point), Cadan Cummings (Agronomy, Madison), Amy Sandel (Water Resources, Stevens Point), Chris Ester (Hydrology, Stevens Point), Justin Helley (Environmental Science, Madison), Margaret Rice (Biological Aspects of Conservation and Environmental Studies, Madison), Joseph Lechelt (Fisheries, Madison), Lucas Rosen (Conservation, River Falls)

### **TEACHING**

*Teaching Assistant.* Environmental Biophysics, University of WI-Madison.

Assisted in lecture preparation, problem set development, and exam preparation. Graded weekly problem sets.

*Teaching Assistant.* Zoology 152: Ecology, Plant Physiology, and Animal Physiology, University of WI-Madison. Led five weekly discussion sections with junior undergraduate students, graded weekly

assignments, tutored students in office hours, and supervised independent research and writing projects.

*Teaching Assistant.* Zoology 151: Evolution, Genetics, and Microbiology, University of WI-Madison. Led five weekly discussion sections with junior undergraduate students, graded weekly assignments, and tutored students in office hours.

*Teaching Assistant.* Soil Science 230: Soil: Ecosystem and Resource, University of WI-Madison. Assisted in lecture preparation, problem set development, and exam preparation. Graded weekly problem sets and exams.

*Review session tutor.* Soil Science 301: General Soil Science, University of WI-Madison. Led three review sessions and tutored students prior to exams.

## **PROFESSIONAL SERVICE & LEADERSHIP**

### ***External Service and Leadership***

2023-Present	David H. Smith Postdoctoral Conservation Fellowship Program Advisory Board Member
2022	David H. Smith Postdoctoral Conservation Fellowship Finalist Interview Panel
2021-2023	Test Development and Evaluation Committee Member. Certified Crop Advisor California Nitrogen Management Specialty Exam.
2021-Present	Drought Expert. University of California, Davis ( <a href="#">link</a> ) and University of California Agriculture and Natural Resources ( <a href="#">link</a> )
2020-2023	University of California Agriculture and Natural Resources Delegate to the Universities Council on Water Resources
2020-Present	David H. Smith Postdoctoral Conservation Fellowship Reviewer—Soil Science, Plant Science, Hydrology, Agroecology, Science Communication Proposals
2018-Present	Founding Member and Leadership Team. ‘Plant Love Stories’ ( <a href="#">link</a> ) Wisconsin Potato and Vegetable Grower Groundwater Task Force
2013-2019	Invited to consult in development of a baseline irrigation practices survey (conducted December 2014) and meet bimonthly to discuss agriculture and water resources
2017-2019	Wausau Urban Community Gardens Outreach Committee Invited to conduct educational programming for gardeners
2018-present	500 Women Scientists. Vetted consultant for journalists, educators, and policy makers for requests related agriculture, soil science, and hydrology. ( <a href="#">link</a> )

### ***Internal Service and Leadership***

2024	Extension Committee, Department of Biological Systems Engineering
2023	Hydrologic Sciences Scholarship Review Committee, University of California, Davis

2023	Small Farms Staff Researcher Search Committee, University of California Agriculture and Natural Resources
2023	Department of Land, Air, and Water Resources Mission and Vision Committee
2022-2023	Search Committee Vice Chair. Professor of Cooperative Extension in Soil Health. University of California, Davis
2021-2023	Lactation Task Force. Identified needs/resources/space for lactation in LAWR when students/staff expressed concerns about distance and crowding in campus facilities
2021-2023	Graduate Advising and Mentoring Program Pilot committee. Soils and Biogeochemistry Group. University of California, Davis
2021-2023	Fundraising Committee. Department of Land, Air, and Water Resources. University of California, Davis
2020-2023	Land, Air, and Water Resources Subject Editor. University of California Agriculture and Natural Resources Publications
2020-2023	Strategic Initiatives Water Leadership Panel. University of California Agriculture and Natural Resources
2020-2023	Soils and Biogeochemistry Group Representative. Graduate Studies Fellowship Review Committee.
2021-2022	Professors of Cooperative Extension Position Proposal Committee Member
2021	Water Policy Certificate Program Input Session. University of California, Davis
2021	Library Strategic Planning Focus Group-Cooperative Extension, Diversity, Equity, and Inclusion. University of California, Davis
2020	College of Ag and Env Sciences Academic and Strategic Plan Feedback Committee. Department of Land, Air, and Water Resources. University of California, Davis
2020	Diversity, Equity, and Inclusion Program Review. Hydrologic Sciences Graduate Program. University of California, Davis
2020	Search Committee Member. Irrigation & Water Resources Advisor. University of California Agriculture and Natural Resources
2019-Present	Faculty Member. Soils and Biogeochemistry Graduate Program. University of California, Davis
2019-Present	Faculty Member. Hydrologic Sciences Graduate Program. University of California, Davis
2019-2021	Diversity, Equity, Inclusion Committee. Department of Land, Air, and Water Resources. University of California, Davis

***Conference Sessions and Workshops Chaired/Facilitated***

‘Ingenuity in a Warming World: Droughts, Floods, and Disturbance’ American Geophysical Union Fall Meeting Online and In-Person Poster Sessions. 12/14/22. Chicago, IL

‘Communicating Agricultural Irrigation Research to Stakeholders.’ Universities Council on Water Resources National Roundtable Series. 4/14/21. Facilitator.

‘Agriculture and Irrigation Roundtable.’ Universities Council on Water Resources National Roundtable Series. 4/14/21. Facilitator.

‘Agrohydrology in a Changing World: From Global Processes to Local Outcomes.’ American Geophysical Union Fall Meeting elightning Session. 12/11/20. Virtual

'Agrohydrology in a Changing World: From Global Processes to Local Outcomes.' American Geophysical Union Fall Meeting lightning Session. 12/11/19. San Francisco, CA  
'Agro-IBIS 12<sup>th</sup> Annual Agroecosystem Modeling Workshop.' Organized, Hosted, Facilitated. 4/10-4/12/19. St. Paul, MN.  
'Agrohydrology in a Changing World: From Global Processes to Local Outcomes.' American Geophysical Union Fall Meeting lightning Session. 12/12/18. Washington D.C.  
'Climate Change Risk & Adaptation.' North American Congress for Conservation Biology. 7/25/18. Toronto, Canada.  
'Soil Physics and Hydrology Lightning Competition.' Soil Science Society of America Annual Meeting, 11/7/16. Phoenix, Arizona.

**Ad-Hoc Peer Reviewer:** *Global Change Biology, Nature Water, Vadose Zone Journal, Journal of Environmental Quality, Plant and Soil, Agronomy, Hydrology and Earth Systems Sciences, Ecohydrology, Hydrogeology Journal, Global Change Bioenergy, Water Resources Research, Ag and Forest Meteorology, and Scientific Reports*

### **Society Memberships**

American Geophysical Union (2012-2014, 2017-present)  
Society for Conservation Biology (Lifetime membership awarded in 2017)  
American Society for Agronomy, Soil Science Society of America, & Crop Science Society of America (2014-2019, 2021-present)  
Earth Science Women's Network (2012-present)

## **PROFESSIONAL DEVELOPMENT & CERTIFICATIONS**

**'United States Federal Aviation Administration part 107 License'** (2019, certified May 17)  
Completed web-based training (Drone Pilot Ground School)  
Licensed and renewed to fly remotely piloted aircrafts under FAA part 107 through 2023.  
Licensure obtained at Marshfield Municipal Airport. Marshfield, WI.

**'Photosynthesis Training Course'** (2019, 3-day)  
Facilitated by Dr. Aaron Saathoff, Senior Applications Scientist at LI-COR Biosciences. Lincoln, Nebraska.

**'Unix, Python, and Git Workshop'** (2019, 2-day)  
Facilitated by Chaochih Lium, Nicholas Dunn, and Cody Hennesy at Software Carpentry. University of Minnesota. Minneapolis, MN.

**'Facilitation Training'** (2018, 2-day)  
Facilitated by Julian Griggs (Dovetail Consulting Group). David H. Smith Conservation Fellowship Training Retreat. Santa Barbara, California.

**'Leadership Development Workshop'** (2018, 4-day)  
Facilitated by Dr. Maureen Ryan (Conservation Science Partners). David H. Smith Conservation Fellowship Training Retreat. Jackson Hole, Wyoming.

**'Survey Research Methods Short Course'** (2018, 0.5-day)

Facilitated by Profs. Ashely Dayer (Virginia Tech) and Kenny Wallen (University of Arkansas).  
North American Congress for Conservation Biology. Toronto, Canada.

***'Bayesian Statistics and the R Tidyverse package'*** (2018, 1-day)

Facilitated by Dr. Sean Anderson (Fisheries and Oceans Canada). David H. Smith Conservation Fellowship Training Retreat. Acadia National Park, Maine.

***'Business management principles for conservation research'*** (2018, 1-day)

Facilitated by Drs. Mike Dombeck (former Director of the US Bureau of Land Management and US Forest Service) and Brett Dickson (President & Chief Scientist, Conservation Science Partners).  
David H. Smith Conservation Fellowship Training Retreat. Acadia National Park, Maine.

***'Media communications training for scientists'*** (2018, 2-day)

Facilitated by Tim Ward and Teresa Erickson (Intermedia Communications Training). David H. Smith Conservation Fellowship Training and Policy Retreat. Washington D.C.

***'Generation Image: photographs as archived data and outreach workshop'*** (2017, 0.5-day)

Soil Science Society of America Annual Meeting. Tampa, FL.

***'Agricultural Drones Workshop'*** (2017, 1-day)

Soil Science Society of America Annual Meeting. Tampa, FL.

***'Unconscious bias and diversity, equity, inclusion, and justice'*** training (2017, 2-day) Facilitated by

Whitney Tome (The Raben Group). David H. Smith Conservation Fellowship Training Retreat. Baraboo, Wisconsin.

***'Transformational Storytelling'*** training for scientific communication (2017, 2-day) Facilitated by Tim

Ward and Teresa Erickson (Intermedia Communications Training). David H. Smith Conservation Fellowship Training Retreat. Baraboo, Wisconsin.

***'Generalized Linear Models'*** workshop (2017, 1-day)

Facilitated by Dr. Sean Anderson (Fisheries and Oceans Canada). David H. Smith Conservation Fellowship Training Retreat. Mt. Hood, Oregon.

***'Write to Change the World'*** leadership and public writing workshop (2017, 1-day) Facilitated by Zeba

Khan (The Op-Ed Project). David H. Smith Conservation Fellowship Training Retreat. Mt. Hood, Oregon.

***MODFLOW-HYDRUS-AgroIBIS coupled modeling workshop*** (2016, 2-day)

University of Wisconsin-Madison. Madison, WI.

***'Breaking the Bias Habit'*** workshop (2015, 0.5-day)

Soil Science Society of America Annual Meeting. Minneapolis, MN.

***AgroIBIS modeling workshops*** (2013, 2-day; 2012, 2-day)

University of WI-Madison. Madison, WI; University of MN-Twin Cities. Minneapolis, MN.

***'Skills for Networking and Communication'*** Workshop (2012, 2.5-day)

Facilitated by Kerry Ann Rockquemore (National Center for Faculty Development & Diversity).  
Sponsor: Earth Science Women's Network. Madison, WI.