

Steven Paul Loheide II

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Education

- 2006 Ph.D. Hydrogeology, Stanford University (2006)
Thesis title: “Innovative methods for determining natural discharge in riparian environments”
Advisor: Steven Gorelick, Ph.D.
- 2001 M.S. Geology, Indiana University (2001)
Thesis title: “The use of stable isotopes in hydrology – Case studies on the mineral springs of south-central Indiana and the Taupo geothermal system in New Zealand”
Advisor: Noel Krothe, Ph.D.
- 1999 B.S. Geology and Environmental Chemistry, University of Northern Iowa (1999)
Minor: Physics
Thesis title: “The hydrogeology of the Cedar Hills Sand Prairie”
Advisor: Mohammad Z. Iqbal, Ph.D.
Thesis title: “Thermo- and photo-degradation of dyes on semi-conductors”
Advisor: Shoshanna Coon, Ph.D.
Summa Cum Laude

Professional Positions

- 2018- Professor of Civil and Environmental Engineering, UW – Madison
2021-2022 Visiting Scholar; Desert Research Institute & University of Nevada-Reno
2012-2018 Associate Professor of Civil and Environmental Engineering, UW – Madison
2015-2016 Visiting Professor, Meliksah University, Kayseri, Turkey
2014 Fulbright Scholar - Universidad Nacional de San Luis, Argentina
2012-2014 Chair, Freshwater and Marine Sciences Program, UW - Madison
2006-2012 Assistant Professor of Civil and Environmental Engineering, UW - Madison
2001-2006 Research Assistant/Fellow, Department of Geological and Environmental Science, Stanford University
2001 Intern, Exxon-Mobil Upstream Research Company
1999-2001 Fellow/Associate Instructor, Dept. of Geological Sciences, Indiana University

Affiliations at UW-Madison

Geological Engineering
Freshwater and Marine Sciences Program

Gaylord Nelson Institute for Environmental Science (Water Resource Management and Environment and Resources Programs)

Awards and Honors

- Harvey Spangler Award for Innovative Teaching and Learning Practices, 2021
- Vilas Faculty Mid-Career Investigator Award (2018-2020)
- Fulbright Scholar - Universidad Nacional de San Luis, Argentina, 2014-2015
- Editors' Citation for Excellence in Refereeing for Geophysical Research Letters, 2012 (cited by Paolo D'Odorico)
- NSF CAREER Award (Environmental Sustainability and Hydrologic Sciences, 2010)
- Zimmerman Faculty Fellow, Department of Civil and Environmental Engineering, University of Wisconsin - Madison (2010-2015)
- Eminent Professor Visit Award, Department of Civil and Environmental Engineering, Monash University, Australia (2011)
- McGee Grant (2002, 2003), Stanford University
- Geological Society of America Graduate Student Research Grant (2002)
- Patton Award in support of research on "The origin of mineral spring waters in southern Indiana" (with Dana Cannon; 1999)
- Department of Geological Sciences Funding in support of research, Indiana University (2000)
- 2001 Estwing Award Outstanding Graduate Student, Department of Geological Sciences, Indiana University
- Various undergraduate awards including: SOAR Grant for Undergraduate Research, Academic Advancement Award, Intercollegiate Academics Award, College of Natural Sciences Dean's Experiential Learning Award, W. A. Tarr Award for Meritorious Service, Dean of Natural Science Award, Chemistry Honor Roll University of Northern Iowa, Chemistry Research Stipend, Outstanding Physical Chemistry Student Award, University of Northern Iowa Deans List, Purple and Old Gold Award for meritorious scholarship in Geology

TEACHING ACTIVITIES

Loheide has taught eight courses in the Water Resources Engineering program during his time at UW. A brief description of the courses are provided below:

Course	Description
INTEREGR 102: (2cr) Introduction to Society's Engineering Grand Challenges	<i>A course designed to introduce freshman level students to engineering. Description and discussion of how engineering disciplines address specific engineering grand challenges in society. Focus on societal and multicultural issues encountered in engineering, as well as economic, ethical and political constraints on engineering solutions. Development of students' professional skills.</i>
CEE 311: (3cr) Hydroscience	<i>Core required course in the CEE curriculum. Introduction to the water cycle, its relationship to the environment and human attempts to conserve, control, and utilize water judiciously.</i>
CEE 412: (3 cr) Groundwater Hydraulics	<i>Elective course for upper level undergraduate and graduate students. Develops analytical approaches for modeling groundwater flow and introduces numerical methods for describing groundwater flow.</i>
CEE 619: (3cr) Hydroecology	<i>Newly developed course, primarily for graduate students (80%) which explores the intricate relationships between ecologic and hydrologic processes. Focuses on recent theoretical developments in the field, evaluation of peer-reviewed literature, and field-based group projects.</i>
CEE 919: (1cr) Seminar Hydraulic Engineering and Fluid Mechanics	<i>Seminar for water resource engineering subgroup which serves two purposes: 1) provides a forum for inviting external speakers to campus to present on current research topics, and 2) allows students to develop communication skills by giving formal research presentations.</i>
CEE 619b: (1cr) Environmental Flows (co-led seminar with Dr Richard Beilfuss)	<i>An interdisciplinary seminar co-developed with Richard Beilfuss (adjunct professor CEE) to introduce environmental flows, which describe the quantity, timing, and quality of water flows required to sustain freshwater and estuarine ecosystems and the human livelihood and well-being that depend on these ecosystems.</i>
CEE 619c: (3cr) Advanced Groundwater Hydrology	<i>An international, interdisciplinary course co-developed with Tom Gleeson (McGill University) and Grant Ferguson (University of Saskatchewan). Graduate level course for examining a variety of cutting-edge research ideas and techniques in the specialized topics including: groundwater ecohydrology, mega-scale hydrogeology, and the energy-groundwater nexus. The course applied hands-on and advanced techniques using real, messy data and engaged students in critically reading, discussing and synthesizing recent and benchmark literature</i>
CEE 619d: (3cr) CUAHSI Specialized Online Hydrology Courses	<i>An inter-university course designed to enhance the depth and breadth of graduate course offerings at universities across the nation, increase the rate of uptake of new research, expose students to modern hydrologic theory and methods and facilitate networking among our hydrologic community. Students choose 3 modules, each of which are offered by leading faculty in these specialized research niches from across the country.</i>

The table below summarizes all the courses taught by Loheide and their respective grade distributions.

Summary of courses taught and their grade distributions

Semester	Course #	# of credits	# of students	Grade distribution							Average GPA	
				A	AB	B	BC	C	D	F		
Sp 2007	CEE619	3	12	4	5	2						3.59
Fa 2007	CEE311	3	39	5	9	6	6	8	2	3		2.63
Sp 2008	CEE619	3	10 (1 Audit)	4	3	2						3.61
Fa 2008	CEE311	3	50	6	10	13	6	7	8	0		2.70
Sp 2009	CEE412	3	10	3	4	1	1	0	1	0		3.25
Sp2009	CEE919	1	9	7	2	0	0	0	0	0		3.89
Fa 2009	CEE311	3	71	9	15	14	13	16	3	1		2.79
Sp 2010	CEE619	3	10	4	2	3	1	0	0	0		3.45
Sp 2010	CEE619b	1	13	11	2	0	0	0	0	0		3.92
Fa 2010	CEE311	3	79	10	15	12	19	18	4	1		2.73
Sp 2011	CEE 919	1	8	3	5	0	0	0	0	0		3.69
Sp 2011	CEE412	3	19 (2 Audit)	4	4	6	3	0	0	0		3.26
Fa 2011	CEE311	3	82	9	13	15	23	17	4	1		2.71
Sp 2012	CEE619	3	25 (1 Audit)	7	10	7	0	0	0	0		3.5
Fa 2012	CEE311	3	60	5	12	19	9	11	4	0		2.79
Fa 2012	INTER102	1	150	57	30	38	17	7	0	1		3.36
Sp 2013	CEE 412	3	15	7	1	5	0	1	0	0		3.46
Sp 2013	CEE 619	1	5 (5 Audit)	-	-	-	-	-	-	-		S
Sp 2013	CEE 919	1	14	7	5	0	0	0	0	0		3.79
Fa 2013	INTER102	2	125	51	55	14	0	2	1	1		3.57
Fa 2013	CEE 311	1	57	8	9	14	8	14	2	1		2.78
Sp 2014	INTER102	2	96	45	33	12	5	0	0	1		3.58
Sp 2014	CEE619	3	6 (2Audit)	5	1	0	0	0	0	0		3.91
Sp 2015	Curso Eco-hidrologia	3	27	-	-	-	-	-	-	-		N/A
Fa 2015	CEE 311	3	46	6	6	14	9	9	1	0		2.84
Fa2015	CEE 919	1	19 (11 P/F)	4	4	0	0	0	0	0		3.75
Sp2016	CEE619	3	14	5	6	3	0	0	0	0		3.57
Sp 2016	CEE 311	3	63	8	16	9	15	13	2	0		2.87
Sp 2016	CEE 919	1	21 (9 P/F)	8	4	0	0	0	0	0		3.83
Fa 2016	CEE 311	3	68 (1 P/F)	9	10	20	15	9	4	0		2.84
Sp 2017	CEE 412	3	16 (1 P/F)	6	4	5	0	0	0	0		3.53
Sp 2017	CEE 311	3	67	9	13	13	13	16	3	0		2.81
Fa 2017	CEE 311	3	70	10	11	20	14	12	3	0		2.85
Fa 2017	CEE619	3	14	10	1	2	0	1	0	0		3.66
Sp 2018	CEE 619	3	13	4	6	3	0	0	0	0		3.54

Table continued...

Summary of courses taught and their grade distributions

Semester	Course #	# of credits	# of students	Average GPA
Sp 2018	CEE 919	1	17	3.7
Fa 2018	CEE 311	3	63	4.15
Fa 2018	CEE 919	1	21	3.83
Fa 2018	CEE 619	3	10 UW (57 total)	4.50
Sp 2019	CEE 412	3	15	3.50
Sp 2019	CEE 919	1	22	3.83
Fa 2019	CEE 619	3	11	3.87
Fa 2019	CEE 311	3	60	2.91
Fa 2019	CEE 919	1	18	3.79
Sp 2020	CEE 612	3	18	4.67
Sp 2020	CEE 919	1	21	4.00
Fa 2020	CEE 619	3	9	3.64
Fa 2020	CEE 311	3	58	2.84
Fa 2020	CEE 919	1	21	4.00
Sp 2021	CEE 412	3	16	4.20
Sp 2021	CEE 619	1-3	12	4.50
Sp 2021	CEE 919	1	23	N/A

Teaching and Learning Workshops and Seminars Attended

Loheide attended the week-long 2007 Teaching Academy Summer Institute at UW-Madison to learn how to best incorporate real examples of water resource issues in the Hydroscience curriculum to improve the course's relevancy.

Loheide participated in a semester-long, Faculty Mentor Training Seminar sponsored by the Delta Program. The purpose was to discuss challenges that arise in mentoring and improve advisor-advisee relationships. This group was led by Trina McMahon and included faculty and post-docs at various points in their career from science and engineering fields.

Loheide participates in special workshops that are offered such as "Teaching Synchronous Online Engaged Classes" that was offered by the Center for the Integration of Research, Teaching, and Learning (CIRTL), and "The Role of Faculty in Supporting Student Mental Health" offered by University Health Services.

Peer review of candidate's teaching

The policy of the Department of Civil and Environmental Engineering at the University of Wisconsin -Madison is to evaluate the teaching of all assistant professors at least one time per year, though Loheide seeks more frequent evaluation. Loheide teaches *Hydroscience (CEE 311)*, a core, required class in the undergraduate curriculum every fall semester. During the spring semesters he alternates between teaching *Hydroecology (CEE 619)* and *Groundwater Hydraulics (CEE 412)*, both of which are upper level undergraduate/ graduate level course in his area of specialty. Professor Potter, another member of the Water Resource Engineering Group, teaches Hydroscience every spring semester and has reviewed Loheide's teaching of this class. Professors Wu and Hoopes are the other tenured members of the Water Resource Engineering Group and have also evaluated Loheide's teaching. In addition, Professor McMahon, Professor Fratta, and Professor Russell (former CEE department chair) have also reviewed the candidates teaching. The timing and summary of these reviewers is provided in the table below and the full evaluations are available upon request.

Summary of peer review evaluations of candidate's teaching

Semester	Course	Evaluator	Selected Comment
Spring 2007	CEE 619	Prof. Hoopes	<i>Steve's class was very well planned, prepared, and delivered.</i>
Spring 2008	CEE 619	Prof. McMahon	<i>Steve very much encouraged critical thinking. He asked guiding questions as he went through the material, to make sure the students were digesting the lecture content.</i>
Fall 2008	CEE 311	Prof. Potter	<i>He lectured clearly and with enthusiasm.</i>
Spring 2009	CEE 412	Prof. Fratta	<i>He commanded the class pace and students' discussion, he used different media to present the class material, and he engaged the students to maintain their interest.</i>
Fall 2009	CEE 311	Prof. Potter	<i>Steve has a thorough command of the material, and is both relaxed and enthusiastic. He is serious about teaching well and is clearly succeeding.</i>
Spring 2010	CEE 619	Prof. Wu	<i>Steve obviously really loves this topic. He continuously ask students what they think and give students his personal opinions [on the future directions of the field].</i>
Fall 2010	CEE 311	Prof. Russell	<i>I found all these items to be well organized and useful. More specifically, I was struck with how well he relates his lecture topic to contemporary events in the news. His ability to relate his material to current social discourse is unique and, I would expect, highly beneficial in motivating the students.</i>
Spring 2011	CEE 412	Prof. Wu	<i>During the lecture, Steve continuously asked students questions like "What would you expect if this parameter changes". I can see that Steve has great experience on this subject.</i>

Student evaluations

In the Department of Civil and Environmental Engineering, one question (Q 22), is intended to assess the instructor relative to instructors of all other classes. Question 22 is shown below. Loheide's class average is presented for every course (excluding seminars) that he has taught at UW-Madison.

The mean for all evaluations conducted in the department and the mean score of all evaluations from core required courses in the CEE undergraduate curriculum is also provided as a reference.

Instructor Rating

22. Your rating of this instructor compared to all instructors you have had is:

Top 20% Next 20% Middle 20% Next 20% Bottom 20%

Summary of student evaluations

Semester	Course #	Question 22 (max 5.0)			
		Response rate	Candidate score	Department mean	Core course mean
Sp 2007	CEE619	11/12	3.91	N/A	N/A
Fa 2007	CEE311	36/39	3.86	3.85	3.84
Sp 2008	CEE619	9/10	4.11	4.05	3.88
Fa 2008	CEE311	41/50	3.95	3.95	3.79
Sp 2009	CEE412	10/10	4.70	4.02	3.95
Fa 2009	CEE311	55/71	3.65	3.91	3.63
Sp 2010	CEE619	4/10	4.50	3.88	3.86
Fa 2010	CEE311	55/79	4.35	3.89	3.83
Sp 2011	CEE412	15/17	4.93	3.89	3.87
Fa 2011	CEE311	46/82	4.00	4.00	3.84
Sp 2012	CEE619	20/26	4.15	3.64	3.64
Fa 2012	CEE 311	28/61	3.89	4.08	4.04
Fa 2012	Inter 102	21/24	4.38	4.08	4.04
Sp 2013	CEE 412	6/15	5.00	4.10	3.97
Sp 2013	CEE619	-	NA	4.10	3.97
Fa 2013	Inter 102	31/31	4.22	3.97	4.01
Fa 2013	CEE311	29/57	4.14	3.97	4.01
Sp 2014	Inter 102	31/31	4.34	3.97	3.67
Sp 2014	CEE 619	6/8	4.67	3.97	3.67
Fa 2015	CEE311	30/46	4.23	4.24	4.05
Sp 2016	CEE311	33/63	3.58	4.09	4.14
Sp 2016	CEE 619	5/14	4.40	4.09	4.14
Fa 2016	CEE 311	56/68	4.09	4.03	4.10
Sp 2017	CEE 311	61/67	3.93	3.94	3.91
Sp 2017	CEE 412	8/16	4.75	3.94	3.91
Fa 2017	CEE 311	68/70	3.72	3.82	3.76
Fa 2017	CEE 619	10/14	4.43	3.82	3.76
Sp 2018	CEE619	13/13	4.85	N/A	N/A
Fa 2018	CEE 311	48/63	4.15		
Fa 2018	CEE 619	5/10	4.5		
Fa 2018	CEE919	-	N/A		
Sp 2019	CEE 919	-	N/A		
Sp 2019	CEE 412	6/15	4.67		

Fa 2019	CEE 311	3/60	3.50
Fa 2019	CEE919	-	N/A
Fa 2019	CEE 619	7/11	4.33
Sp 2019	CEE 919	-	N/A
Sp 2019	CEE 612	12/18	4.67
Fa 2019	CEE 311	29/58	4.34
Fa 2019	CEE919	-	N/A
Fa 2019	CEE 619	6/9	4.5
Sp 2020	CEE 919	8/21	5.0
Sp 2020	CEE 612	12/18	4.67
Fa 2020	CEE 311	29/58	4.34
Fa 2020	CEE919	6/21	4.67
Fa 2020	CEE 619	6/9	4.50
Sp 2021	CEE 412	12/16	4.20
Sp 2021	CEE 619	5/12	4.50
Sp 2021	CEE 919	-	N/A

RESEARCH ACTIVITIES

Publications

Note: **Loheide** is listed in bold, students and postdocs advised by Loheide are underlined, and his *PhD advisor* (Gorelick) is listed in italics.

1. Christopher J. Kucharik*, Eric G. Booth, **Steven P. Loheide II**, Rebecca Power, Adena R. Rissman, Jenny Seifert, Monica G. Turner (2022) Building US food-energy-water security requires avoiding unintended consequences for ecosystems, *Frontiers in Ecology and the Environment*. 2021) in review
2. Sullivan P, + 13 others, (2023) Groundwater-the dynamic base of the Critical Zone *in Critical Zone and Ecosystems Dynamics*
3. Jefferson AJ, Loheide SP II and McCay DH (2022) Faculty perspectives on a collaborative, multi-institutional online hydrology graduate student training program. *Front. Water* 4:958094. doi: 10.3389/frwa.2022.958094
4. Hyman-Rabeler, K. A., & Loheide II, S. P. (2023). Drivers of Variation in Winter and Spring Groundwater Recharge: Impacts of Midwinter Melt Events and Subsequent Freezeback. *Water Resources Research*, 59(1), e2022WR032733. <https://doi.org/10.1029/2022WR032733>
5. Ryzak, A. C., Bart, D., Booth, E. G., & Loheide, S. P. (2022). Foliar Nutrients Reflect Variation in Floristic Quality and Hydrology of Calcareous Fens. *Wetlands*, 42(6), 60. <https://doi.org/10.1007/s13157-022-01574-2>
6. Booth, E. G., Loheide II, S. P., & Bart, D. (2022). Fen ecohydrologic trajectories in response to groundwater drawdown with an edaphic feedback. *Ecohydrology*, e2471. <https://doi.org/10.1002/eco.2471>
7. Coville, R. C., Kruegler, J., Selbig, W. R., Hirabayashi, S., Loheide, S. P., Avery, W., et al. (2022). Loss of Street Trees Causes 6,000L/Tree Increase in Leaf-on Stormwater Runoff for Great Lakes Urban Sewershed. *Urban Forestry & Urban Greening*, 127649. <https://doi.org/10.1016/j.ufug.2022.127649>
8. CUAHSI Officers & Board of Directors, A Ward, **SP Loheide II**, + 15 others (2022). COVID-19 Impacts Highlight the Need for Holistic Evaluation of Research in the Hydrologic Sciences. *Water Resources Research*, 58(2), e2021WR030930. <https://doi.org/10.1029/2021WR030930>
9. Selbig, WR., **SP Loheide II**, W Shuster, BC. Scharenbroch, RC. Coville, J Kruegler, W Avery, R Haefner, and D Nowak. (2022) Quantifying the Stormwater Runoff Volume Reduction Benefits of Urban Street Tree Canopy. *Science of The Total Environment*, 151296. doi.org/10.1016/j.scitotenv.2021.151296.

10. DM Ciruzzi and **SP Loheide II**. (2021) Monitoring Tree Sway as an Indicator of Interception Dynamics Before, During, and Following a Storm, *Geophysical Research Letters* 48(20). doi.org/10.1029/2021GL094980.
11. Voter CB, **SP Loheide II**. (2021) “Climatic Controls on the Hydrologic Effects of Urban Low Impact Development Practices” *Environmental Research Letters*, Environ. Res. Lett. 16 064021.
12. DM Ciruzzi and **SP Loheide II**. (2021) Groundwater subsidizes tree growth and groundwater use in sandy humid forests. *Ecohydrology*, 14:e2294. <https://doi.org/10.1002/eco.2294>.
13. Jackson, TD, Sethi, S, Dellwik, E, Angelou, N, Bunce, A, van Emmerik, T, Duperat, M, Ruel, J.-C., Wellpott, A, Van Bloem, S, Achim, A, Kane, B, Ciruzzi, DM, **Loheide II, SP**, James, K, Burcham, D, Moore, J, Schindler, D, Kolbe, S, Wiegmann, K, Rudnicki, M, Lieffers, VJ, Selker, J, Gougherty, AV, Newson, T, Koeser, A, Miesbauer, J, Samelson, R, Wagner, J, Coomes, D, and Gardiner, B (2021) The motion of trees in the wind: a data synthesis. *Biogeosciences*, 18(13), 4059–4072. <https://doi.org/10.5194/bg-18-4059-2021>
14. Huang J, A Desai, J Zhu, P Stoy, **SP Loheide II**, H Bogena, Y Zhang, Z Zhang, F Arriaga. (2020). Retrieving Heterogeneous Surface Soil Moisture at 100 m Across the Globe via Fusion of Remote Sensing and Land Surface Parameters. *Frontiers in Water*. 2. 578367. [10.3389/frwa.2020.578367](https://doi.org/10.3389/frwa.2020.578367).
15. **SP Loheide II**. (2020). Collaborative Graduate Student Training in a Virtual World, *EOS*, 101, <https://doi.org/10.1029/2020EO152183>.
16. Voter CB, **SP Loheide II**. (2020). Where and When Soil Amendment is Most Effective as a Low Impact Development Practice in Residential Areas, *Journal of the American Water Resources Association*
17. Bart D, Booth EG, **Loheide SP II**, Bernthal T (2020) The Impacts of Groundwater Extraction on Calcareous Fen Floristic Quality, *Journal of Environmental Quality*
18. Tague, CL, SA Papuga, C Gerlein-Safdi, S Dymond, RR Morrison, EW Boyer, D Riveros-Iregui, E Agee, B Arora, YG Dialynas, A Hansen, S Krause, S Kuppel, **SP Loheide II**, SJ Schymanski, and SC Zipper (2020), Adding our leaves: a community-wide perspective on research directions in ecohydrology. *Hydrological Processes*. doi:10.1002/hyp.13693
19. Ciruzzi DM and **SP Loheide II** (2019) Monitoring tree sway as an indicator of water stress, *Geophysical Research Letters*, doi.org/10.1029/2019GL084122
20. Nocco MA, SC Zipper, EG Booth, CR Cummings, **SP Loheide II**, and CJ Kucharik (2019) Combining Evapotranspiration and Soil Apparent Electrical Conductivity Mapping to Identify Potential Precision Irrigation Benefits, *Remote Sens*. 11(21), 2460, doi.org/10.3390/rs11212460 - 23 Oct 2019

21. Motew MM, X Chen, SR Carpenter, EG Booth, J Seifert, J Qiu, **SP Loheide II**, MG Turner, SC Zipper, CJ Kucharik (2019) Comparing the effects of climate and land use on surface water quality using future watershed scenarios. *Science of the Total Environment*, 693, <https://doi.org/10.1016/j.scitotenv.2019.07.290>.
22. Chen X, MM Motew, EG Booth, SC Zipper, SP Loheide II, CJ Kucharik, (2019) Management of minimum lake levels and impacts on flood mitigation: A case study of the Yahara Watershed, Wisconsin, USA. *Journal of Hydrology*, 577, doi:10.1016/j.jhydrol.2019.123920
23. Qiu J, SC Zipper, M Motew, EG Booth, CJ Kucharik, **SP Loheide II**, (2019) Nonlinear groundwater influence on biophysical indicators of ecosystem services. *Nature Sustainability*, doi:10.1038/s41893-019-0278-2
24. Voter CB, **SP Loheide II**. (2018). Urban Residential Surface and Subsurface Hydrology: Synergistic Effects of Low-Impact Features at the Parcel-Scale. *Water Resources Research*, 54. doi:10.1029/2018WR022534
25. Qiu J, SR Carpenter, EG Booth, M Motew, SC Zipper, CJ Kucharik, **SP Loheide II**, MG Turner (2018). Understanding relationships among ecosystem services across spatial scales and over time. *Environmental Research Letters*. doi:10.1088/1748-9326/aabb87
26. Zipper SC, MM Motew, EG Booth, X Chen, J Qiu, CJ Kucharik, SR Carpenter, **SP Loheide II** (2018). Continuous separation of land use and climate effects on the past and future water balance. *Journal of Hydrology*. doi:10.1016/j.jhydrol.2018.08.022
27. Cao D, B Shi, X Gong, G Wei, **SP Loheide II** and L Yang. (2018). Investigation of the influence of soil moisture on thermal response tests using active distributed temperature sensing (A–DTS) technology. *Energy and Buildings*. doi:10.1016/j.enbuild.2018.01.022
28. Qiu J, SC Carpenter, EG Booth, MM Motew, SC Zipper, CJ Kucharik, X Chen, **SP Loheide II**, J Seifert, MG Turner. (2018). Scenarios reveal pathways to sustain future ecosystem services in an agricultural landscape. *Ecological Applications*. doi:10.1002/eap.1633
29. 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*, doi: 10.2136/vzj2017.01.0008.
30. Soylu, M.E., **S.P. Loheide II**, and C.J. Kucharik. (2017). Effects of root distribution and root water compensation on simulated water use in maize influenced by shallow groundwater. *Vadose Zone Journal*. 16(10). doi:10.2136/vzj2017.06.0118
31. Zipper SC, ME Soyly, CJ Kucharik, **SP Loheide II**. (2017) Quantifying indirect groundwater-mediated effects of urbanization on agroecosystem productivity using MODFLOW-AgroIBIS (MAGI), a complete critical zone model. *Ecological Modelling*, 359: 201-219. doi:10.1016/j.ecolmodel.2017.06.002

32. Teodosio B, V Pauwels , **SP Loheide II**, and E Daly (2017), Relationship between root water uptake and soil respiration: a modeling perspective, *Journal of Geophysical Research: Biogeosciences.*, doi:10.1002/2017JG003831
33. Motew MM, X Chen, EG Booth, SR Carpenter, P Pinkas, SC Zipper, **SP Loheide II**, SD Donner, K Tsuruta, P Vadas, CJ Kucharik. (2017) The influence of legacy P on lake water quality in a Midwestern agricultural watershed. *Ecosystems*. doi:10.1007/s10021-017-0125-0.
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35. Ankenbauer, K. J., and **S. P. Loheide** (2017), The effects of soil organic matter on soil water retention and plant water use in a meadow of the Sierra Nevada, CA, *Hydrological Processes*, 31(4), 891–901, doi:10.1002/hyp.11070.
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Invited presentations and abstracts at conferences

SP Loheide II, H Barker, DM Ciruzzi, and ER Larson, 2021. Taters, trout, and/or trees? Understanding landscape scale tradeoffs among ecosystem services and using critical zone science to evaluate the effectiveness of artificial recharge to create synergies. American Geophysical Union Fall Meeting, New Orleans, LA, December 2021.

SP Loheide II, SC Zipper, I Varvaris, ME Soylu and CJ Kucharik, 2021. Groundwater-crop interactions: How shallow groundwater affects yield and how groundwater management can close the yield gap. American Geophysical Union Fall Meeting, New Orleans, LA, December 2021.

K Rabeler and SP Loheide II, 2021. Impacts of Climate Warming on Frozen Ground Regimes and Groundwater Recharge. American Geophysical Union Fall Meeting, New Orleans, LA, December 2021.

DM Ciruzzi, H Barker, ER Larson and SP Loheide II, 2021. Remotely sensed influence of groundwater on forests during drought in Wisconsin. American Geophysical Union Fall Meeting, New Orleans, LA, December 2021.

Loheide SP II (2019) CUAHSI Virtual University: An experiment in inter-institutional collaboration in graduate training. American Geophysical Union Fall Meeting, San Francisco CA, December 2019.

Loheide SP II, 2018. Groundwater Research: A brief history of the past 100 years, American Geophysical Union Annual Meeting, Washington DC.

Loheide SP II, Monitoring water stress in temperate forests using accelerometers. European Geophysical Union General Assembly, Vienna, Austria. 8–13 April 2018.

Loheide SP II, Keynote Lecture: The influence of groundwater on agroecosystems and vice versa. Hydroeco2017, Ecohydrology on the Edge: Ecology-hydrology-human interactions in a changing world, 6th International Multidisciplinary Conference on Hydrology and Ecology, University of Birmingham 18-23 June 2017.

Loheide SP, EG Jobbagy, and R Gimenez, 2016, Developing flood resistance in the Argentinian Chaco by surrounding fields with forest strips. Geological Society of America Annual Meeting, Denver, CO.

Loheide SP II, Urban Stormwater Sustainability, June 2014, Sustainable Urban Environments: Innovation for the future, Shanghai, China.

Loheide II SP, 2013. Ecohydrology research for sustainability: Informing decision making, Society for Freshwater Science Annual Meeting, Jacksonville.

Loheide, SP II, 2012, Monitoring Hydroecologic Change in a Restored Riparian Wetland: A Need for Improved Soil Moisture Measurement Technology, INVITED, webinar hosted by the Consortium of Universities for the Advancement of Hydrologic Science, Nov 16, 2012.

Loheide II SP, 2011. Hydroecologic change: restoration of a riparian wetland, Berkeley Catchment Science Symposium.

Lowry CS, Loheide SP II, Deems JS, Moore CE, Lundquist JD, 2010. Importance of snowmelt-derived fluxes on the groundwater flow in a high elevation meadow, American Geophysical Union Annual Meeting, San Francisco.

Loheide II SP, 2010. The groundwater component of ET and the groundwater subsidy provided to vegetation: Equivalent quantities? CUAHSI 2nd Biennial Colloquium on Hydrologic Science and Engineering, Boulder, CO.

Loheide II SP, 2009. Hydrologic processes in meadows, National Fish and Wildlife Foundation: Meadow Forum, North Lake Tahoe, CA.

Loheide II SP, 2009. Characterization of groundwater processes in riparian areas using thermal remote sensing, NovCare 2009, Leipzig Germany, Keynote Address.

Loheide II SP, 2009. A scientific basis for riparian restoration: Monitoring, modeling, and predicting the interactions between vegetation and hydrology, Wisconsin Ecology Symposium, Madison, WI, (Followed by panel discussion).

Loheide II SP, 2008. Effects of changing channel morphology on vegetation, groundwater, and soil moisture regimes in groundwater dependent ecosystems, American Geophysical Union Annual Meeting, San Francisco, CA.

Loheide II SP, 2007. Thermal remote sensing detection of groundwater discharge to streams, Session: Innovations and New Technologies for Measuring and Characterizing Groundwater–Surface Water Interaction, Geological Society of America Annual Meeting, Denver, CO.

Contributed presentations and abstracts at conferences

H Barker, SP Loheide II, 2022. Tradeoffs and synergies of ecosystem services from managed aquifer recharge, 45th annual AWRA Wisconsin Meeting, March 10-11.

SP Loheide II, Interinstitutional Graduate Training across the INFIEWS network, 2022 INFIEWS PI Workshop, February 2022

R Mills, F Rezanezhad, E Bulur, SA Napieralski, E Arntzen, SP Loheide II, E Roden, M Ginder-Vogel and P Van Cappellen, 2021. Transport and Retention of Particulate Organic Matter in Riverbed Sediments: Lab Experiments and Modelling. American Geophysical Union Fall Meeting, New Orleans, LA, December 2021.

D McCay and SP Loheide II, 2021. Institutional and Faculty Benefits of Participating in a Collaborative Graduate Student Training Program. American Geophysical Union Fall Meeting, New Orleans, LA, December 2021.

A Alexander, CB Voter, SP Loheide II and DB. Wright, 2021. Incorporating Impacts of Green Infrastructure into a Large-Scale Land Surface Model. American Geophysical Union Fall Meeting, New Orleans, LA, December 2021.

D.M. Ciruzzi, WA Avery, H. Barker, W.R. Selbig, and S.P. Loheide II. 2021. Monitoring tree sway as an indicator of interception processes before, during, and after a storm. 44th annual AWRA Wisconsin Meeting, March 3-4.

GA Alexander, CB. Voter, SP Loheide II, DB Wright. 2021. Incorporating the Hydrologic Impacts of Low Impact Development in a Large-Scale Land Surface Model. 44th annual AWRA Wisconsin Meeting, March 3-4. ****Award for outstanding graduate student presentation***

WA Avery, S.P. Loheide II, W.R. Selbig, H. Barker, GA Alexander, and C.B. Voter. 2021. Precipitation throughfall beneath urban tree canopies: An investigation of precipitation re-direction. 44th annual AWRA Wisconsin Meeting, March 3-4.

K Rabeler and SP Loheide II. 2021. Recharge or runoff? Impacts of changing snow cover and frozen ground regimes on groundwater recharge in the Midwest. 44th annual AWRA Wisconsin Meeting, March 3-4. ****Award for outstanding graduate student presentation***

Albano, C.M., L. Saito, S.P. Loheide. 2021. Quantifying Environmental Water Requirements for Groundwater Dependent Ecosystems in Nevada. Nevada Water Resources Association Annual Meeting. Jan 18 - 31.

EE Roden, E Bulur, SA Napieralski, SP Loheide II and M Ginder-Vogel, Transport-reaction modeling of particulate organic matter dynamics in riverbed sediments. 2020 American Geophysical Union Fall meeting. 1-17 Dec.

SP Loheide II. 2020. A pandemic friendly model for inter-institutional graduate training. 2020 American Geophysical Union Fall meeting. 1-17 Dec.

DM Ciruzzi, WA Avery, H Barker, WR Selbig, and SP Loheide II. 2020. Potential for a new interceptometer: Monitoring tree sway period as an indicator of interception before, during, and after it rains. 2020 American Geophysical Union Fall meeting. 1-17 Dec.

K Rabeler and SP Loheide II. 2020. Impact of Changing Frozen Ground Regimes on Groundwater Recharge. 2020 American Geophysical Union Fall meeting. 1-17 Dec. ****Award for outstanding graduate student presentation***

S Herzog, AS W, J Bales, RT Barnes, NB Basu, TP Covino, EH Habib, SP Loheide II, J Maertens, L Yoder, J Masterman and M Ross, 2020. Assessing distance learning in the hydrologic sciences: key takeaways from student and instructor surveys during and after the transition to online teaching. American Geophysical Union Fall meeting. 1-17 Dec.

WA Avery, S.P. Loheide II, W.R. Selbig, H. Barker, K. Rabeler, D.M. Ciruzzi, and C.B. Voter. 2020 The role of urban canopy architecture in precipitation redistribution. American Geophysical Union Fall Meeting. Online. 1-17 Dec.

DM Ciruzzi and SP Loheide II. 2020 (CANCELLED DUE TO COVID-19 PANDEMIC). Reconstructing groundwater and lake levels with tree cores in sandy temperate forests. Joint Summer 2020 ASLO-SFS meeting.

DM Ciruzzi, WA Avery, H Barker, W Selbig, and SP Loheide II. 2020 (CANCELLED DUE TO COVID-19 PANDEMIC). Monitoring tree sway period as an indicator of interception before, during, and after it rains. WI-AWRA Section Meeting.

M Ginder-Vogel, S Bessey, SP Loheide, EE Roden (2019) Particulate Organic Matter Retention by Sandy Sediments. American Geophysical Union Fall Meeting, San Francisco CA, December 2019.

CB Voter, SP Loheide (2019) Restoring urban ecohydrologic fluxes on a lot-by-lot basis: Which doors to knock on first? American Geophysical Union Fall Meeting, San Francisco CA, December 2019.

WA Avery, SP Loheide, W Selbig, H Barker, CB Voter (2019) Investigation of precipitation throughfall patterns beneath urban tree canopies: An exploration of precipitation re-direction and implications for stormwater management. American Geophysical Union Fall Meeting, San Francisco CA, December 2019.

CB Voter, SP Loheide (2019) Advancing understanding of single family parcel hydrology to improve the hydroecologic outcomes of low impact practices. American Geophysical Union Fall Meeting, San Francisco CA, December 2019.

ET Ito, CE Hatch, SP Loheide II, WP Clement, DF Boutt, (2019). Testing potential outcomes of a wetland restoration using a groundwater modeling approach. Geological Society of America Annual Meeting, Phoenix, AZ

SP Loheide II, (2019), Hydroecologic Science, National Atmospheric Deposition Program Spring Meeting, Madison, WI

SP Loheide II and DM Ciruzzi, (2019), CUAHSI Virtual University: An inter-institutional framework for graduate education applied to the hydrologic sciences. University of Wisconsin Teaching and Learning Symposium, Madison, WI.

DM Ciruzzi and SP Loheide II, (2019), Building virtual collaborative skills and a learning community with discussion boards in an inter-institutional online classroom. University of Wisconsin Teaching and Learning Symposium, Madison, WI.

DM Ciruzzi and SP Loheide II, (2019), Trees as hydrologic sensors: Evaluating tree rings to reconstruct historic groundwater levels in central and northern Wisconsin, 43rd annual AWRA Wisconsin Meeting, Delevan, WI, 28 February. **Award for outstanding graduate student presentation*

WA Avery, SP Loheide II, WR Selbig, DM Ciruzzi, C Voter, and Brian Schalff, (2019) Quantification and Prediction of the Impact of Urban Trees of the Reduction of Stormwater Runoff, 43rd annual AWRA Wisconsin Meeting, Delevan, WI, 28 February

A Ryzak, EG Booth, D Bart, P Townsend, and SP Loheide II, (2019) Hyperspectral Remote Sensing of Calcareous Fens, 43rd annual AWRA Wisconsin Meeting, Delevan, WI, 28 February

EG Booth, SP Loheide II, and D Bart (2019) Positive Feedback between Hydrology and Soil Properties May Make Fen Wetlands More Susceptible to Groundwater Drawdown, 43rd annual AWRA Wisconsin Meeting, Delevan, WI, 28 February

CB Voter, and SP Loheide II. (2019) Soil amendment as a green infrastructure practice in residential areas. American Water Resources Association-Wisconsin Section Annual Meeting. Delavan, WI. 28 February ****Award for outstanding graduate student presentation***

K Nohr, CB Voter, and S.P. Loheide II (2019) Comparing Soil Infiltration Capacity Among and Within Residential Parcels in Milwaukee, WI, 43rd annual AWRA Wisconsin Meeting, Delevan, WI, 28 February ****Award for outstanding undergraduate student presentation***

B Selbig, SP Loheide II, W Shuster, R Coville, R Haefner, B Scharenbroch, (2019) Monitoring the Impacts of Trees on Urban Stormwater Volume Reduction, 43rd annual AWRA Wisconsin Meeting, Delevan, WI, 28 February

CB Voter, and S.P. Loheide II. December 14, (2018). Quantifying weather-driven differences in the hydrologic outcomes of low-impact practices. American Geophysical Union Fall Meeting, Washington D.C.

CB Voter, and S.P. Loheide II. October 1, (2018). Climate- and development-driven heterogeneity in hydrologic fluxes from urban residential parcels. Long Term Ecological Research Network All-Scientists Meeting, Monterey Bay, CA.

CB Voter, and S.P. Loheide II. July 30, 2018. What's the weather like? How climate affects the hydrologic outcomes of low-impact practices on residential parcels. CUASHI Biennial, Sheperdstown, WV.

CB Voter, and S.P. Loheide II. March 8, 2018. Measuring and Modeling Stormwater Runoff from Residential Blocks in Milwaukee, WI. 42nd Annual Meeting of the American Water Resources Association-Wisconsin Section, Appleton, WI.

DM Ciruzzi and SP Loheide II, 2018, Monitoring tree sway as an indicator of water stress in temperate forests, Abstract H11W-1779 presented at the 2018 American Geophysical Union Fall Meeting, 10-14 Dec.

SP Loheide II, DM Ciruzzi, CS Lowry, C Tague, HA Michael, DW Hyndman, AD Kendall, S Tyler, M Thompson, and E Tran, 2018, CuAHSI Virtual University: An inter-institutional framework for graduate

education applied to the hydrologic sciences, Abstract ED51E-0706 presented at the 2019 American Geophysical Union Fall Meeting, Washington DC, 10-14 Dec.

DM Ciruzzi and SP Loheide II, 2018, Evaluating tree growth and groundwater use along a depth to groundwater gradient in sandy Wisconsin forests, CUAHSI Biennial Meeting

DM Ciruzzi and SP Loheide II, 2018, Evaluating tree growth and groundwater use along a depth to groundwater gradient in sandy Wisconsin forests, 2018 LTER All Scientists Meeting

DM Ciruzzi, 2018, Tree growth and groundwater use in sandy Wisconsin forests, presented at the NTL-LTER Early Career Scientists Meeting, UW-Madison, March 21

DM Ciruzzi and SP Loheide II, 2018, Evaluating tree growth and quantifying groundwater use in sandy Wisconsin forests, presented at the 42nd annual AWRA Wisconsin Meeting, Appleton, WI, March 8

A Ryzak, EG Booth, D Bart, and SP Loheide II, 2018, Linking Hydrology, Spectroscopy, and Floristic Quality of Fens, presented at the 42nd annual AWRA Wisconsin Meeting, Appleton, WI, March 8

Booth EG, SP Loheide II, D Bart. (2017) Fen ecohydrologic trajectories in response to groundwater drawdown with edaphic, floristic, and hydrologic feedbacks. American Geophysical Union Fall Meeting, New Orleans, LA, December 2017.

Ciruzzi, D, SP Loheide II. (2017) Tree Growth Response to Drought Along a Depth to Groundwater Gradient in Northern Wisconsin. American Geophysical Union Fall Meeting, New Orleans, LA, December 2017.

Qiu J, SC Zipper, MM Motew, EG Booth, CJ Kucharik, SP Loheide II. (2017) Nonlinear ecosystem services response to groundwater availability under climate extremes. American Geophysical Union Fall Meeting, New Orleans, LA, December 2017.

Ciruzzi, D, SP Loheide II. (2017) Measuring Diurnal Signals in Tree Sway Period as an Indicator of Water Stress. 41st Annual Meeting of the American Water Resources Association – Wisconsin Section, Elkhart Lake, WI.

Voter CB, SP Loheide II. (2017) Potential Change in Groundwater Recharge Around the Madison Lakes Under Alternate Residential Development Scenarios. 41st Annual Meeting of the American Water Resources Association – Wisconsin Section, Elkhart Lake, WI.

Nocco M, SC Zipper, EG Booth, M Ruark, SP Loheide II, CJ Kucharik. (2017) High-Resolution Mapping of Evapotranspiration and Apparent Electrical Conductivity in the Wisconsin Central Sands: Could Precision Irrigation Conserve Groundwater? 41st Annual Meeting of the American Water Resources Association – Wisconsin Section, Elkhart Lake, WI.

LoBue A, EG Booth, SP Loheide II. (2017) Soil Moisture and Plant Root Distribution Influence on Root Water Uptake in Prairie, Forest, and Corn. 41st Annual Meeting of the American Water Resources Association – Wisconsin Section, Elkhart Lake, WI.

Ciruzzi D, SP Loheide II. (2016) Investigating Groundwater Influenced Trees during Drought at Different Spatial Scales in Northern Wisconsin. 40th Annual Meeting of the American Water Resources Association – Wisconsin Section, Wisconsin Dells, WI.

Lobue A, EG Booth, SP Loheide II. (2016) Plant Roots, Soil, and Hydrology Relations of Prairie, Wetland, and Forest Vegetation Communities within the Yahara River Watershed, Wisconsin. 40th Annual Meeting of the American Water Resources Association – Wisconsin Section, Wisconsin Dells, WI. **Winner of Best Poster Presentation.**

Scherber K, SP Loheide II. (2016) Hydrologic Impacts of Wisconsin's Winter on Surface Water – Groundwater Interactions. 40th Annual Meeting of the American Water Resources Association – Wisconsin Section, Wisconsin Dells, WI.

Voter CB, SP Loheide II. (2016) Hydroecologic Outcomes of Alternate Residential Development Patterns: What's Weather Got To Do with It? 40th Annual Meeting of the American Water Resources Association – Wisconsin Section, Wisconsin Dells, WI.

Zipper SC, E Soylu, CJ Kucharik, SP Loheide. (2016) AgroIBIS-MODFLOW (AIM): A new coupled groundwater-vadose zone-agroecosystem 40th Annual Meeting of the American Water Resources Association – Wisconsin Section, Wisconsin Dells, WI.

Voter CB, SP Loheide II. (2016) Effect of Weather Patterns in Cities Across the United States on Surface Runoff, Deep Drainage, and Evapotranspiration from a Residential Parcel. American Geophysical Union Fall Meeting, San Francisco CA, December 2016.

Loheide II SP, R Gimenez, E Jobbagy. (2015) The groundwater subsidy to vegetation: groundwater exchanges between landcover patches. American Geophysical Union Fall Meeting, San Francisco CA, December 2015.

Yang Y, M Ozdogan, A Kurban, SP Loheide II, X Chen. (2015) The Impact of Land Cover and Land Use Changes on the Hydrological Cycle of the Tarim Basin, NW China. American Geophysical Union Fall Meeting, San Francisco CA, December 2015.

Zipper SC, ME Soylu, EG Booth, SP Loheide II. (2015) Impacts of shallow groundwater and soil texture on agricultural drought resistance. American Geophysical Union Fall Meeting, San Francisco CA, December 2015.

Chen X, M Motew, EG Booth, SR Carpenter, SP Loheide II, CJ Kucharik. (2015) Simulating Water and Nutrient Transport in an Urbanizing Agricultural Watershed with Lake-Level Regulation Using a Coupled Modeling Approach. American Geophysical Union, Fall Meeting 2015. abstract #H13C-1532.

Booth EG, X Chen, M Motew, J Qiu, SC Zipper, SR Carpenter, CJ Kucharik, SP Loheide II. (2015) From provocative narrative scenarios to quantitative biophysical model results: Simulating plausible

futures to 2070 in an urbanizing agricultural watershed in Wisconsin, USA. E.G. American Geophysical Union Fall Meeting, San Francisco CA, December 2015.

Voter CB, SP Loheide II. (2015) Changing spatial patterns of evapotranspiration and deep drainage in response to the interactions among impervious surface arrangement, soil characteristics, and weather on a residential parcel. American Geophysical Union, Fall Meeting 2015.

Vose JM, C Ford Miniati, CA Luce, H Asbjornsen, P Caldwell, J Campbell, G Grant, D Isaak, G Sun, SP Loheide II (2015) Ecohydrological Implications of Drought for U.S. Forests. American Geophysical Union, Fall Meeting 2015.

Ciruzzi D, and SP Loheide II. (2015) Relationships Between Shallow Groundwater and Tree Growth in a Northern Wisconsin Forest. American Geophysical Union Fall Meeting, San Francisco CA, December 2015.

Cruz S, D Ciruzzi, SP Loheide II. (2015) Evaluating the Wisconsin Northwoods as a Groundwater Influenced Ecosystem. Society for Advancement of Chicanos and Native Americans in Science National Conference, Interdisciplinary Collaboration: The Role of Diversity in STEM Innovation, Washington, DC, October 29-31.

Voter CB, SP Loheide II. (2015) Soil moisture and evapotranspiration as a function of distance from impervious features in residential parcels. 39th Annual Meeting of the American Water Resources Association-Wisconsin Section, Oconomowoc, WI.

Zipper SC, SP Loheide II. (2015) Shallow groundwater and soil texture drive subfield-scale yield patterns. American Water Resources Association Wisconsin Section Meeting, Oconomowoc WI, March 2015.

Ciruzzi D, SP Loheide II. (2015) Spatiotemporal Measurements of Soil Tension Along an Actively Heated Fiber Optic Cable: A Numerical Modeling and Analytical Solution Approach. 39th Annual Meeting of the American Water Resources Association-Wisconsin Section, Oconomowoc, WI.

Chen X, M Motew, EG Booth, S Carpenter, SP Loheide II, CJ Kucharik. (2015), Simulating changing water and nutrient transport in the Yahara River watershed using a coupled modeling approach, American Water Resources Association Wisconsin Section Annual Meeting, Oconomowoc, WI.

Zipper SC, ME Soylu, EG Booth, SP Loheide II. (2015) Untangling the influences of shallow groundwater and soil texture on corn yield variability. Long Term Ecological Research Network (LTER) All Scientist Meeting, Estes Park CO, September 2015.

Zipper SC, ME Soylu, SP Loheide II. (2015) Critical zone interactions between groundwater, soil, and agricultural production. Geological Society of America North-Central Sectional Meeting, Madison WI, May 2015.

Zipper SC, SP Loheide II. (2014) The influence of shallow groundwater on crop productivity. International Long-term Ecological Research All scientists meeting of the Americas, Valdivia, Chile

Booth EG, CJ Kucharik, SP Loheide II. (2014) Assessing Agricultural Vulnerability to Recent Climate Change and Variability in Wisconsin Using USDA Crop Insurance Indemnity Data. 38th Annual Meeting of the American Water Resources Association – Wisconsin Section, Wisconsin Dells, WI.

Ankenbauer K, SP Loheide II. (2014) Soil Hydraulic Properties Are Strongly Related to Soil Organic Content and Can Affect Soil Moisture Availability for Plants. 38th Annual Meeting of the American Water Resources Association – Wisconsin Section, Wisconsin Dells, WI. **Winner of Best Poster Presentation.**

Daly E, P Verma, SP Loheide II. (2014) Hydraulic Redistribution: A modeling perspective. American Geophysical Union, Fall Meeting 2014. abstract #H13E-1155.

Zipper SC, SP Loheide II. (2014) The influence of shallow groundwater on crop productivity. International Long-term Ecological Research All scientists meeting of the Americas, Valdivia, Chile

Zipper SC, SP Loheide II. (2014) ‘Mapping subfield-scale evapotranspiration to assess agricultural drought sensitivity’. American Geophysical Union Fall Meeting, December 2014.

Zipper SC, SP Loheide II. (2014) 'Spatially variable impacts of shallow groundwater and soil texture on yield'. Water for Food 2014 Global Conference, October 2014. **First Prize, Scholarly Poster Competition.**

Zipper SC, ME Soylu, SP Loheide II (2014) ‘Soil texture and groundwater availability as drivers of subfield-scale yield variability’. American Water Resources Association Wisconsin Section meeting, March 2014.

Voter CB, SP Loheide II (2014) Modeling the Hydrologic Effects of Parcel-Scale Changes in Lot Layout and Impervious Surface Connectivity. 38th Annual Meeting of the American Water Resources Association-Wisconsin Section, Wisconsin Dells, WI.

Daly E, P Verma, SP Loheide II. (2014) Modelling dynamic mechanisms of root water uptake: Hydraulic redistribution and root water compensation, XX. International Conference on Computational Methods in Water Resources (CMWR 2014), Stuttgart, 10-13 June, 2014.

Verma P, SP Loheide II, E Daly. (2013) Modelling root water compensation and redistribution in shallow groundwater environments, 40th International Association of Hydrogeologists Congress (IAH 2013), Perth, 15-20 September, 2013.

Verma P, SP Loheide II, E Daly. (2013) Modelling root water compensation and redistribution, AOGS, Brisbane, 24-29 June, 2013

Voter CB, JF Miller, SP Loheide II. (2013). Modeling the effects of nuanced changes in lot layout and impervious area connectivity on urban recharge in COMSOL. Poster presented at the annual meeting of the Wisconsin Section of the American Water Resources Association, Brookfield, WI.

Soylu ME, SP Loheide II, CJ Kucharik. (2013) Effects of compensatory root water uptake and water table depth variations on net primary productivity and transpiration. Invited Speaker, ASA, CSSA, & SSSA International Annual Meetings, Tampa, FL.

Loheide II SP. (2013) Ecohydrology research for sustainability: Informing decision making, Invited Speaker, Society for Freshwater Science Annual Meeting, Jacksonville.

Soylu ME, CJ Kucharik, SP Loheide II. (2013) Impact of crop compensatory root water uptake on net primary productivity and transpiration under inter-annual climate and water table depth variations, Water for food global conference – Building resilient agroecosystems, poster presentation, Lincoln, NE.

Soylu ME, SP Loheide II, CJ Kucharik. (2013) Impact of crop compensatory root water uptake on net primary productivity and transpiration under inter-annual climate and water table depth variations. May 9-10, 8th Agro-IBIS Workshop, oral presentation, Lincoln, NE.

Soylu ME, CJ Kucharik, SP Loheide II. (2013) Introducing the AIM (Agro-IBIS-MODFLOW) model: simulating groundwater and crop interactions in the Yahara watershed of Wisconsin, and potential model applications. May 9-10, 8th Agro-IBIS Workshop, oral presentation, Lincoln, NE.

Soylu ME, SP Loheide II, CJ Kucharik. (2013) Examining the influence of shallow groundwater on net primary productivity and evapotranspiration in managed ecosystems, 37th Annual Meeting of the American Water Resources Association – Wisconsin Section, oral presentation, Milwaukee, WI.

Booth EG, SP Loheide II. (2013) Monitoring and Modeling Restored Wetlands Along the East Branch Pecatonica River. Invited lecture to University of Wisconsin Interface Colloquium, November 13, 2013.

Booth EG, SC Zipper, SP Loheide II, CJ Kucharik. (2013) Is Groundwater Recharge Always Serving Us Well? Water Supply and Crop Production in Conflict in the Yahara River Watershed, Wisconsin. American Geophysical Union, Fall Meeting 2013. abstract #H23P-01.

Zipper SC, EG Booth, SP Loheide II. (2013) Groundwater subsidies and penalties to corn yield. American Geophysical Union, Fall Meeting 2013. abstract #H21F-1119.

Loheide II SP, M Weber, EG Booth. (2013) Dynamic ice formation drives stream-aquifer interactions. American Geophysical Union, Fall Meeting 2013. Abstract #H41N-06.

Zipper SC, EG Booth, SP Loheide II. (2013) Shallow Groundwater Impacts on Corn Biophysics and Yield during a Drought, Yahara River Watershed, Wisconsin. 37th Annual Meeting of the American Water Resources Association – Wisconsin Section, Brookfield, WI. **Winner of Best Presentation.**

Zipper SC, SP Loheide II. (2013) ‘Mapping persistent patterns of evapotranspiration to assess ecosystem sensitivity’ Wisconsin Ecology Symposium.

Zipper SC, SP Loheide II. (2013) ‘Shallow groundwater impacts on corn biophysics and yield during a drought’. Best Student Presentation Award. 37th Annual Meeting of the American Water Resources Association - Wisconsin Section meeting, Brookfield, WI.

Booth EG, SC Zipper, SP Loheide II, CJ Kucharik. (2012) Recharge as an Ecosystem Service and Disservice in a Midwestern, Urbanizing, Agricultural Watershed with an Increasing Precipitation Trend. American Geophysical Union, Fall Meeting 2012. abstract #B23D-0480.

Soylu ME, CJ Kucharik, SP Loheide II. (2012) Analyzing Groundwater-Vegetation Interactions using a Dynamic Agroecosystem Model. American Geophysical Union, Fall Meeting 2012. abstract #H31N-07.

Booth EG, SP Loheide II (2012) Yahara River Watershed Hydrologic Retrospective Analysis: Long-term Averages and Trends in an Urbanizing Agricultural Landscape. 36th Annual Meeting of the American Water Resources Association - Wisconsin Section, Wisconsin Dells, WI.

Zipper SC, SP Loheide II. (2012) Linking Shallow Groundwater to Crop Yield Using Remotely Sensed Data, Yahara Watershed, WI. 36th Annual Meeting of the American Water Resources Association - Wisconsin Section, Wisconsin Dells, WI.

Weber MD, SP Loheide II. (2012) Investigating the relationship between dynamic ice formation and hyporheic exchange at the East Branch Pecatonica River. 36th Annual Meeting of the American Water Resources Association - Wisconsin Section, Wisconsin Dells, WI.

Miller JF, SP Loheide II. (2012) A comparison of the stormwater detention capabilities of four neighboring wetland swales. 36th Annual Meeting of the American Water Resources Association - Wisconsin Section, Wisconsin Dells, WI. **WINNER BEST ORAL PRESENTATION.**

Verma P, SP Loheide II, E Daly. (2012) A model of transpiration for phreatophytes, AOGS-AGU (WPGM) Joint Assembly, Singapore, 13-17 August, 2012

Miller JF, SP Loheide II. (2012) Explaining the differences in urban stormwater flow attenuation capabilities between adjacent constructed wetland swales; Wisconsin Wetlands Association 2/23/2012, Lake Geneva, WI

Booth EG, SP Loheide II. (2011) Floodplain restoration leads to wetter and more diverse soil water regimes and vegetation types: Insight from an integrated hydroecological model, American Geophysical Union Annual Meeting, San Francisco, CA.

Lundquist JD, SP Loheide II. (2011) How evaporative water losses vary between wet and dry water years as a function of elevation in the Sierra Nevada, California, and critical factors for modeling, American Geophysical Union Annual Meeting, San Francisco, CA.

Loheide SP II, EG Booth, CJ Kucharik, SR Carpenter, CGE Katt-Reinders, AR Rissman, MG Turner. (2011) Developing a framework to assess the water quality and quantity impacts of climate change, shifting land use, and urbanization in a Midwestern agricultural landscape, American Geophysical Union Annual Meeting, San Francisco, CA.

Moysey SM, SP Loheide II, S Gangrade, AR Mangel, A Creighton, EG Booth, M Weber, AM Striegl. (2011) Mapping soil variability at the East Branch Pecatonica River Restoration Observatory using GPR and EM Induction, American Geophysical Union Annual Meeting, San Francisco, CA.

Miller JF, SP Loheide II. (2011) Root Length Density Distributions - Effects on Runoff Generation, American Geophysical Union Annual Meeting, San Francisco, CA.

Verma P, SP Loheide II, E Daly (2011) A root water uptake model for phreatophytes, 2011 National Centre for Groundwater Research and Training Workshop, Adelaide, Australia (Best Poster Award)

Striegl AM, SP Loheide II. (2011) Using heated distributed temperature sensing to monitor soil water. 34th Annual Meeting of the American Water Resources Association - Wisconsin Section, Appleton, WI.

Gotkowitz MB, DR Joachim, SJ Vavrus, SP Loheide II, KR Bradbury. (2011) Climate variability and groundwater recharge in Southwest Wisconsin. 34th Annual Meeting of the American Water Resources Association - Wisconsin Section, Appleton, WI.

Joachim DR, SP Loheide II. (2011) Evaluating changes to Wisconsin evapotranspiration under a future climate. 34th Annual Meeting of the American Water Resources Association - Wisconsin Section, Appleton, WI.

Booth EG, SP Loheide II. (2011) Predicting wetland plant composition based on soil moisture regime using a quasi-3D variably-saturated groundwater flow model. 34th Annual Meeting of the American Water Resources Association - Wisconsin Section, Appleton, WI.

Booth EG, SP Loheide II. (2010) Soil moisture versus depth-to-water-level: Which is better for predicting plant composition in a restored floodplain wetland? , American Geophysical Union Annual Meeting, San Francisco, CA.

Loheide SP II, CS Lowry, CE Moore, JD Lundquist. (2010) Groundwater controls on vegetation composition and patterning in mountain meadows, American Geophysical Union Annual Meeting, San Francisco, CA.

Lowry CS, SP Loheide II. (2010) Groundwater subsidy: Quantifying the additional water available for root water uptake, American Geophysical Union Annual Meeting, San Francisco, CA.

Moore CE, JD Lundquist, SP Loheide II. (2010) Modeling alpine meadow restoration techniques and their effects on stream stage regimes, American Geophysical Union Annual Meeting, San Francisco, CA.

Striegl AM, SP Loheide II. (2010) Soil water monitoring using heated distributed temperature sensing, American Geophysical Union Annual Meeting, San Francisco, CA.

Booth EG, SP Loheide II. (2010) Controls on the soil moisture regime of a restored floodplain, East Branch Pecatonica River: A field and modeling investigation. 34th Annual Meeting of the AWRA - Wisconsin Section, Middleton, WI. **Winner of Best Oral Presentation.**

Joachim DR, MB Gotkowitz, SP Loheide II, KR Bradbury, SJ Vavrus. (2010) Evaluating the effects of increased precipitation due to climate change on Wisconsin's groundwater levels. 34th Annual Meeting of the AWRA - Wisconsin Section, Middleton, WI.

Cardinal KE, SP Loheide II. (2010) The influence of root distribution and water stress on evapotranspiration. 34th Annual Meeting of the American Water Resources Association - Wisconsin Section, Middleton, WI.

Booth EG, SP Loheide II. (2010) Monitoring and modeling the effects of floodplain restoration on the soil water regime and vegetation composition: Upper East Branch Pecatonica River, Wisconsin. Upper Midwest Stream Restoration Symposium, La Crosse, WI.

Joachim DR, MB Gotkowitz, SJ Vavrus, SP Loheide II, KR Bradbury. (2010) Evaluating the effects of climate change on groundwater recharge in Southwest Wisconsin, Geological Society of America Annual Meeting, Denver, CO.

Lowry CS, SP Loheide II. (2009) Interactions between root water uptake, groundwater levels, and soil moisture dynamics in Tuolumne Meadows, Yosemite National Park, CA, American Geophysical Union Annual Meeting, San Francisco, CA.

Pathak N, SP Loheide II. (2009) Quantifying hydroecologic change in a degraded wetland with remote sensing, field based monitoring, and modeling approaches, American Geophysical Union Annual Meeting, San Francisco, CA.

Deems JS, JD Lundquist, SP Loheide II. (2009) Climate change impacts on snowmelt hydrology in small Sierra Nevada basins for ecological applications, American Geophysical Union Annual Meeting, San Francisco, CA.

Moore CE, JS Deems, SP Loheide II, JD Lundquist. (2009) Examining alpine meadow restoration techniques through hydraulic modeling, American Geophysical Union Annual Meeting, San Francisco, CA.

Booth EG, SP Loheide II. (2009) Quantifying the hydrologic interactions associated with the plant water stress function and evapotranspiration partitioning in a wetland ecosystem. Geological Society of America Annual Meeting. Portland, OR.

Booth EG, SP Loheide II. (2009) Ecohydrogeomorphology of headwater valley wetlands in the Driftless Area of southwestern Wisconsin. Society of Wetland Scientists, Annual Meeting, Madison, WI.

Loheide SP II, JD Lundquist. (2009) Snowmelt-induced hyporheic pumping in Tuolumne Meadows, Yosemite National Park, CA. Geological Society of America Annual Meeting, Portland, OR.

Deitchman RS, SP Loheide II. (2009) Characterization of groundwater flux using ground-based thermal remote sensing at the seepage face, 33rd Annual Meeting of the American Water Resources Association - Wisconsin Section, Stevens Point, WI. **Recipient of Best Student Presentation Award.**

- Pathak N, EG Booth, SP Loheide II. (2008) Comparing vadose zone and groundwater uptake within different vegetation communities in disturbed wetland ecosystems, Midwest Groundwater Conference, Dubuque, IA.
- Booth EG, SP Loheide II. (2008) Evaluating the hydroecological effects of flood plain restoration in the headwaters of the East Branch Pecatonica River, Wisconsin in The 21st North American Prairie Conference, Winona, MN.
- Loheide II SP, RS Deitchman, DJ Cooper, EC Wolf, CT Hammersmark, and JD Lundquist. (2008) Groundwater controls on vegetation patterning in wet meadow ecosystems of the Sierra Nevada, CA, Ecological Society of America Annual Meeting, Milwaukee, WI.
- Booth EG, SP Loheide II. (2008) A case where a shallower water table leads to drier soils following the restoration of a pre-settlement floodplain surface: Insight from numerical modeling. American Geophysical Union, Fall Meeting 2008, abstract #H33B-1005, San Francisco, CA. (Recipient of Outstanding Student Presentation Award from Hydrology Section).
- Booth EG, SP Loheide II. (2008) Monitoring changes in subsurface hydrology, stream temperature, flood hydraulics, and vegetation following floodplain restoration on the East Branch Pecatonica River, WI in 32nd Annual Meeting of the American Water Resources Association - Wisconsin Section, Brookfield, WI. (Recipient of Best Graduate Student Poster Award).
- Loheide II SP. (2008) Groundwater-vegetation interactions in mountain meadows, European Geophysical Union General Assembly, Vienna, Austria.
- Loheide II SP, SM Gorelick. (2007) Coupled hydroecologic modeling of groundwater flow and vegetation patterning in mountain meadows, Geological Society of America Annual Meeting, Denver, CO.
- Whittemore DO, JJ Butler Jr., GJ Kluitenberg, SP Loheide II. (2007) Climatic and water-use variability impacts on riparian phreatophytes in the Great Plains, Geological Society of America Annual Meeting, Denver, CO.
- Booth EG, SP Loheide II. (2007) Monitoring changes in subsurface hydrology and vegetation following floodplain restoration on the East Branch Pecatonica River, WI in Trout Unlimited Driftless Area Restoration Effort - Science in the Driftless Area Conference, Decorah, IA.
- Loheide II SP, SM Gorelick. (2006) Characterization of hyporheic exchange and baseflow with thermal remote sensing, American Geophysical Union Annual Meeting, San Francisco, CA.
- Butler JJ Jr., DO Whittemore, J Shea, J Bauer, GJ Kluitenberg, SP Loheide II, W Jin. (2006) The vulnerability of native phreatophytes to ground-water level declines in the middle Arkansas River valley, Kansas: *Trans. Kansas Academy Science*, 109 (3/4), p. 249.

Loheide II SP, SM Gorelick. (2005) Mapping of restoration-induced changes in riparian evapotranspiration, American Geophysical Union Annual Meeting, San Francisco, CA.

Shea J, JJ Butler Jr, SP Loheide II. (2005) An assessment of the vulnerability of native phreatophytes to replacement by invasive species in a mid-continent riparian setting, American Geophysical Union Annual Meeting, San Francisco, CA.

Loheide II SP, JJ Butler Jr., SM Gorelick. (2004) A modeling evaluation of a method for estimating groundwater usage by phreatophytes, Geological Society of America Annual Meeting, Denver, CO, Abstracts Vol. 36, No. 5.

Loheide II SP, SM Gorelick. (2004) The ecohydrology of degraded and restored meadow systems, American Geophysical Union Annual Meeting, San Francisco, CA.

Butler Jr. JJ, SP Loheide II, GJ Kluitenberg, K Bayless, DO Whittemore, X Zhan, CE Martin. (2004) Groundwater consumption by phreatophytes in a mid-continent stream-aquifer system, Joint Assembly (CGU, AGU, SEG, EEGS), Montreal, Canada.

Cannon DL, NC Krothe, SP Loheide II. (2001) Sulfur, oxygen and hydrogen isotope studies of conduit freshwater spring and mineral spring flow on the karst Mitchell Plain and the Crawford Upland of S. Indiana. Geological Society of America Annual Meeting, Boston, MA.

Krothe NC, SP Loheide II, DL Cannon. (2001) Delineating mineral and fresh water flow paths in a karst terrain using oxygen, hydrogen and inorganic carbon isotopes and ion chemistry. Geological Society of America Annual Meeting, Boston, MA.

Loheide SP II, DL Cannon, NC Krothe. (2000) Determining the origin of mineral spring waters using oxygen, hydrogen, and sulfur isotopes, Geological Society of America Annual Meeting, Reno, NV.

Cannon DL, SP Loheide II, NC Krothe. (2000) The history of the socio-economic impact of the mineral springs in South Central Indiana, Geological Society of America Annual Meeting, Reno, NV.

Butler Jr. JJ, JM Healey, W McCall, SP Loheide II, E Garnett. (2000) Hydraulic tests with direct-push equipment, American Geophysical Union Annual Meeting, San Francisco, CA.

Loheide SP II, JM Healey, JJ Butler. (1999) A new system for performing slug tests in formations of low hydraulic conductivity, Geological Society of America Annual Meeting, Denver, CO. (Received Austin A. Sartin Best Poster of Session Award).

Loheide SP II, MZ Iqbal. (1998) Hydrogeologic flow in the Cedar Hills Sand Prairie, Black Hawk County, Iowa, Geological Society of America Annual Meeting, Toronto, Canada. (Second Runner up for the Austin A. Sartin Best Poster of Session Award).

Loheide SP II, MZ Iqbal. (1998) The characteristics of the shallow groundwater flow in the Cedar Hills Sand Prairie, Iowa Academy of Science, 110th Session.

Contributed Papers and Presentations at Conferences

Loheide SP II, Iqbal MZ, 1997. The Hydrogeology of the Cedar Hills Sand Prairie in Iowa, Eighth Annual Argonne Symposium for Undergraduate Research.

Unpublished technical reports

David Hill, Barbara Minsker, Thomas Ballestero, John Braden, Patrick Brezonik, Steven Loheide, Franco Montalto, Eberhard Morgenroth, Ian Pepper, Ken Potter, Robert Traver, and Charles Werth. *Science requirements for adaptive and integrated water management*, for WATERS Network Science Plan, January, 21 2008.

Loheide, S. P. and C. B. Voter. 2015. Effects of Nuanced Changes in Lot Layout and Impervious Area Connectivity on Urban Recharge: A Report to the Wisconsin Department of Natural Resources in Completion of WRI Project Number WR12R002. University of Wisconsin-Madison.

Other publications

JM. Vose, C Ford Miniati, CA Luce, H Asbjornsen, P Caldwell, J Campbell, G Grant, D Isaak, **SP Loheide II**, G Sun; 2016, Chap 10: Ecohydrological Implications of Drought; Chapter in *Effects of Drought on Forests and Rangelands in the United States: A Comprehensive Science Synthesis*, United States Forest Service, Gen. Tech. Report WO-93b.

Booth, E.G. and S.P. Loheide, 2013. Human-Induced Floodplain Sedimentation in the Driftless Area of southwestern Wisconsin: Consequences on Riparian Ecosystems. Vignette in Bierman, P.R. and D.R. Montgomery, Key Concepts in Geomorphology <http://www.uvm.edu/~geomorph/textbook/>

Booth, E.G. and S.P. Loheide, 2013. The Drying of Sierra Nevada Wet Meadows by Channel Incision and Opportunities for Restoration. Vignette in Bierman, P.R. and D.R. Montgomery, Key Concepts in Geomorphology <http://www.uvm.edu/~geomorph/textbook/>

Invited research presentations

Loheide SP II, Ecohydrology of groundwater dependent meadows, Department Natural Resources & Environmental Science, University Nevada Reno. November 3, 2021.

Loheide SP II, Forest Ecohydrology & the Role of Groundwater, Graduate Program in Hydrological Sciences, University Nevada Reno. September 24, 2021.

Loheide SP II, Urban Ecohydrology: Developing the science to inform green infrastructure implementation, Desert Research Institute. September 15, 2021.

Loheide SP II, Urban Ecohydrology: Developing the science to inform green infrastructure implementation, River-Coastal Science and Engineering, Tulane University. July 13, 2021.

A Ward, SP Loheide II, A Jefferson, E Habib, and R Barnes, Panelist and presenter in “Transitioning to the online classroom: Virtual Forum,” March 20, 2020

Loheide SP II, CUAHSI Virtual University: An experiment in interinstitutional graduate education Wed, CUAHSI Cyberseminar Oct 30, 2019.

Loheide SP II, CUAHSI Virtual University: An experiment in interinstitutional graduate education, 2019 Fall Cyberseminar Series: Emerging Advances in Hydrologic Education. October 30, 2019

Loheide SP II, Ecohydrology of groundwater influenced ecosystems, The Nature Conservancy Western Groundwater Working Group, June 3, 2019.

Loheide SP II, Groundwater Mediation of Ecohydrologic Processes in Agriculturally-dominated ecosystems. University of Minnesota Department of Earth Sciences Seminar, April 2019

Loheide SP II and DM Ciruzzi, The response of temperate forests to drought: Monitoring water stress and reconstructing historical response. University of Minnesota Special Hydrology Seminar, April 2019

Loheide SP II, Two-way ecohydrologic interactions between groundwater and agriculturally-dominated ecosystems. University of Nevada Reno Hydrologic Sciences Colloquium, March 2019.

Loheide SP II, Understanding the role of groundwater in achieving food security. University of Saskatchewan Distinguished Lecture Series, Nov 2018.

Loheide SP II, Ecohydrology of Groundwater Influence on Terrestrial Ecosystems, Michigan State University, January 2016.

Loheide SP II, Ecohydrology of Groundwater Dependent Ecosystems, Universidad Nacional de San Luis, Argentina, September 2014.

Loheide SP II Ecohydrologic research for sustainability; Informing decision Making, Universidad de Cordoba, Argentina, October 2014.

Loheide SP II, Ecohydrologic research for sustainability; Informing decision Making, June, 2014, Northeast Forestry University, Harbin, China.

Loheide SP II, Ecohydrology of Groundwater Dependent Meadows, Nov 2013, Leading Edge of Earth and Planetary Science Seminar Series, University of North Dakota.

Loheide SP II, Ecohydrology for Sustainability, Nov 2013, Leading Edge of Earth and Planetary Science Seminar Series, University of North Dakota.

Loheide SP II, Modeling of groundwater dependent ecosystems, Department of Civil and Environmental Engineering, Monash University, Clayton, Australia. August, 2011.

Loheide SP II, Ecohydrology of groundwater dependent meadows, Ven Te Chow Hydrosystems Laboratory Seminar Series, Department of Civil and Environmental Engineering, University of Illinois – Urbana/Champaign. January 28, 2011.

Loheide SP II, Ecohydrology of groundwater dependent meadows, Hydrologic Sciences Program, University of Nevada – Reno. March 11, 2011.

Loheide SP II, Ecohydrology of groundwater dependent meadows, Department of Civil and Environmental Engineering, University of Minnesota. April 7, 2011.

Loheide SP II, Connections between groundwater dynamics and vegetation patterns, Chaos and Complex Systems Seminar. University of Wisconsin – Madison. March 22, 2011.

Loheide SP II, The hydroecology of meadows in the Sierra Nevada, CA, Wednesday Night at the Lab, UW public lecture series. January 26, 2011.

Loheide SP II, Hydroecology of meadows in the Sierra Nevada, Department of Land, Air and Water Resources. University of California – Davis. February 24, 2010.

Loheide SP II, A scientific basis for riparian restoration: Monitoring, modeling, and predicting the interactions between vegetation and hydrology, Wisconsin Ecology Symposium. 2009. (Followed by panel discussion).

Loheide SP II, Modeling linkages between hydrology and ecology on floodplains, Institute for Geography, Friedrich-Schiller-University of Jena, Germany. 2009.

Booth EG, SP Loheide II, Stream/floodplain restoration on the East Branch Pecatonica River, Wisconsin, an invited lecture to the Biology Club, Reclamation Club, Environmental Engineering Club, and local Trout Unlimited Chapter, University of Wisconsin, Platteville. December 3, 2007.

Loheide SP II, Remote sensing of riparian hydroecology and restoration, Special Seminar, University of Washington, Department of Civil and Environmental Engineering, Seattle, WA. Tuesday, May 29, 2007.

Loheide SP II, Understanding mountain meadow hydrology and restoration using thermal remote sensing, USGS Water Resources Division Research Seminar Series, Menlo Park, CA. September 29, 2005.

Research students advised

Former PhD students

Dominick Ciruzzi, Assistant Professor, College of William and Mary. Theses (2020). Thesis: Groundwater influence on temperate forests

Carolyn Voter, Assistant Professor, University of Delaware, WI Department of Natural Resources and University of Wisconsin- Madison. Thesis (2019): Hydroecologic Effects of Urban Development Decisions in Residential Areas

Sam C. Zipper, Assistant Research Scientist; Kansas Geological Survey. Thesis (2015): Spatial patterning of hydrological fluxes in human-dominated ecosystems: Controls and implications for ecosystem productivity and water use

Eric Booth, Assistant Scientist, University of Wisconsin –Madison. Thesis (2011): Monitoring and modeling hydroecological changes at a restored floodplain, East Branch Pecatonica River, Wisconsin.

Former MS students

Katrina Rabeler Water Resources Engineer, GeoEngineers, Thesis (2018): Frozen ground effects on groundwater recharge in a changing climate

Keith Lyster (May 2019). Non-Thesis option.

Corey Poland, Engineering Designer, Murraysmith Thesis (2018): Reviewing compost use in construction and modeling the hydrologic response of vegetated compost blankets.

Sarah Bessey, Research Associate, Brown University, Thesis (2018): Particulate organic matter transport in the riverbed of a regulated river and its implications for sustainable development.

John Sourbeer Water Resource Engineer at Golder Gateway Engineers (Dec 2013). Thesis: Hydrologic can vegetation linkages observed with novel soil moisture sensing technology.

Kyle Ankenbauer Chevron Corporation (Dec 2013). Thesis: Changing soil characteristics and biogeomorphic succession in Tuolumene Meadows: Implications for restoration.

Jeff Miller, Epic Systems (Dec 2012). Thesis: Visualization techniques and statistical methods for evaluating the impact of root structure on surface runoff generation in freely drained soils.

Doug Joachim, Water Resource Engineer at Brown and Caldwell (Dec 2011). Thesis: Modeling the effects of climate change on evapotranspiration and groundwater recharge in Wisconsin.

Karen Cardinal, Water Resource Engineer at Whitman Requardt and Associates (May 2010). Thesis: The influence of variable root distributions of native prairie and wetland species on hydrologic processes.

Arlen Striegl, Water Resource Engineer at Golder and Associates (August 2010). Thesis: Development and field implementation of a distributed soil moisture sensor using heated fiber optics.

Richard Deitchman, Associate Attorney at Somach Simmons & Dunn, Lewis and Clark Law School (May 2009). Thesis: Thermal remote sensing of stream temperature and groundwater discharge: Applications to hydrogeology and water resources policy in the state of Wisconsin.

Nayanjyoti Pathak, Systems Programmer at the Transportation and Safety Laboratory at the University of Wisconsin -Madison (Dec 2009). Thesis: Assessment of the hydroecology of Wingra Marsh at the University of Wisconsin Arboretum.

Former postdoctoral associates

- Chris Lowry, associate professor at **University of Buffalo** (Postdoc 2008-2010). Project: Mountain meadow restoration under a changing climate.
- Evren Soyulu, formerly assistant professor at **Meliksah University** in Kayseri, Turkey. (Postdoc 2012-2014) Project: Sustainability of groundwater and related ecosystem services in the Yahara Watershed, WI.
- Xi Chen, assistant professor at **University of Cincinnati**, Ohio. (Postdoc 2015-2017) Project: Surface water routing and related ecosystem services in the Yahara Watershed, WI.

Former undergraduate students (research assistants)

- Chanel Kass
- Kira Langree
- Hans Wildebush
- Chris Strach
- Jerry Wilke
- Arlen Striegl
- Doug Joachim
- Beth Baumgartner
- Natali Colom Cruz
- Jeff Miller
- Matt Weber
- Erin Gross
- Galen Bergquist
- Tyler Davis
- Wally Graeber
- Olivia Fritz
- Taylor Pomije
- Sativa Cruz
- Zarek Boutaghou
- Martin Calderon
- Lorenzo Warrington
- Yeline Del Carmen
- Jared Stieve
- Alie Lobue
- Hannah Freiderich
- Brian Schlaff
- Emiliano Rosel
- Aaron Canton
- Scott Lawson
- Brian Schlaff
- Jared Stieve
- Allison Lobue
- Alex Bauch
- Robert Zabrowski
- Mike Krellwitz
- Harold Barker
- Katlyn Nohr
- Emma Noraian
- Samantha Lambert

Current PhD students and postdocs (with expected degree and graduation date)

- Aaron Alexander (May 2024) Thesis: Massive Green Infrastructure: Managing runoff and precipitation intensity through atmospheric feedbacks
- Arthur Ryzak (May 2022). Thesis: Hyperspectral remote sensing of fens
- William Avery (May 2023). Thesis: The role of street tree interception in generation of stormwater runoff
- Carolyn Voter: postdoctoral researcher in urban ecohydrology
- Ioannis Varvaris: postdoctoral researcher in agroecology

Current MS students (with expected degree and graduation date)

- Kim Scherber (Dec 2022). Thesis: Influence of ice dynamics on surface-water groundwater exchange
- Harold Barker (May 2022). Thesis: Artificial recharge in the Central Sands of Wisconsin – Reducing tradeoffs among agriculture, forestry, and fisheries.

Current undergraduate students (research assistants)

- Lucas Adrian
- Emma Noraian

Grants and contracts

Loheide's current and completed grants and contracts are listed in the tables below. Loheide has been PI, Co-PI, or Senior Personnel on awards totaling ~\$48 million since arriving at UW; ~\$4.76 million of this funding directly supported Loheide's research group. The primary source of support has been the National Science Foundation through the Water Sustainability and Climate, Environmental Sustainability, and Hydrologic Sciences Programs. All grants and contracts were obtained through submission of a formal proposal. Funding obtained from the National Park Service and Wal-mart was awarded by an internal committee; the UW Teaching Academy awarded funds to all participants in the Summer Institute; UW Graduate School Funding was awarded by a committee with the intent of supporting junior faculty, providing insurance against applications for extramural funding, and encouraging multidisciplinary research; and NSF, EPA, DOE, Sea Grant, UW Water Resources Institution, US Forest Service and Wisconsin Groundwater Coordinating Council grants were awarded through peer-review evaluations followed by panel decisions.

Current Grants and Contracts

<i>Title</i>	<i>PIs</i>	<i>Funding Source</i>	<i>Award Total (Loheide share)</i>	<i>Project Duration</i>	<i>Loheide Contribution</i>
<i>RAPID: Collaborative Research: Increased access to infrastructure for distance education in hydrologic science</i>	Ward Loheide Basu Barne Jefferson	NSF	\$49,611 (0)	05/15/2020- 05/14/2021	20%
<i>Strategic Research: Groundwater-forest interactions as guide for artificial groundwater recharge strategies to support agricultural and ecosystems in the Central Sands</i>	Loheide Larson Kucharik	Freshwater Collaborative of WI	\$73,294 (\$38,000)	1/1/21-12/31/22	60%
<i>A University Consortium for Interdisciplinary Water Science</i>	Bales Grant VanBriesen Loheide	NSF	\$13,634,505 (de minimis)	06/01/2019-05/31/2024	5%
<i>WaterSMART: Quantifying Environmental Water Requirements for Groundwater Dependent Ecosystems</i>	Albano Loheide Saito	Dept. of Interior – Bureau of Reclam.	\$296,864 (\$116,230)	7/1/2020 – 6/30/2023	33%
<i>Particulate organic matter (POM) transport and transformation at the terrestrial-aquatic</i>	Ginder-Vogel Roden Loheide Van-Cappellen	DOE	\$550,000 (~\$100,000)	9/15/2019-	~20%

<i>interface</i>	Nezhad Arntzen			9/14/2022	
<i>Impact of changing snow cover and frozen ground regimes on groundwater recharge</i>	Loheide	Ground-water Coordinating Council	\$99,291	7/1/2019 – 6/30/2021	100%
<i>INFEWS/TI: Sustaining food, energy, and water security in agricultural landscapes of the Upper Mississippi River Basin</i>	Kucharik Loheide Booth Turner Rissman	NSF	\$2,499,683 (~\$600,000)	7/1/19 - 6/30/24	25%
<i>Groundwater-forest interactions during drought in temperate forests across scales</i>	Loheide Townsend	NSF Hydrologic Sciences	\$434,934 (~\$346,000)	8/01/2017-7/31/2020	90%
<i>Training the Next Generation of Scientists to Protect Human Health and the Environment: A Collaboration of UW - Madison & EPA – MED</i>	Hurley	EPA	\$1,999,900 <i>(dependent on trainee placement)</i>	11/01/18 - 10/31/21	10%
<i>Quantifying the role of urban trees in reducing stormwater runoff</i>	Loheide	US Forest Service	\$129,288	03/15/2018 - 06/01/2020	100%
<i>The hydrologic and ecologic effects of green infrastructure within urban coastal catchments</i>	Loheide	SeaGrant	\$208,221 (\$208,221)	02/01/2017-1/31/2019	100%
<i>LTER: Comparative study of a suite of lakes in Wisconsin</i>	Stanley (PI) (Loheide is one of 5, cover page co-PIs)	NSF	\$7,680,000 (TBD)	11/01/14-10/31/20	10%

Completed Grants and Contracts

<i>Title</i>	<i>PIs</i>	<i>Funding Source</i>	<i>Award Total (Loheide share)</i>	<i>Project Duration</i>	<i>Loheide Contribution</i>
<i>LTER: Comparative study of a suite of lakes in Wisconsin</i>	Stanley (PI) (Loheide is one of 20+ co-PIs)	NSF	\$5,292,651 (N/A)	11/01/14-10/31/20	5%
<i>Vilas Mid-Career Investigator Award</i>	Loheide	UW	\$100,000	7/01/2018-6/30/2020	100%
<i>Exploratory Research: Transport and Transformation of Particulate Organic Matter in Permeable Riverbed Sediments</i>	Ginder-Vogel Roden Loheide	DOE	\$150,000 (~70,000)	8 /01/2016-12/01/2018	30%
<i>Developing Scenario Models to Analyze Impacts of Groundwater Withdrawal on Calcareous Fens</i>	Loheide Bart	EPA	\$240,842 (~\$150,00)	04/1/2016-12/31/2018	50%
<i>Collaborative graduate education across institutional boundaries</i>	Loheide	Educational Innovation in the College of Engineering, UW	\$29,394	7/1/2017-6/30/2018	100%
<i>Groundwater-forest interactions in Northern Wisconsin</i>	Loheide	UW Graduate School	\$45,000	07/1/16-06/30/17	100%
<i>Hydrologic impacts of the loss of Wisconsin's Winter on surface water - groundwater interactions</i>	Loheide	Wisconsin Groundwater Coordinating Council	\$100,256	07/01/2014 - 06/30/2016	100%
<i>Changing soil characteristics of Tuolumne Meadows: Increased vulnerability and implications for meadow restoration</i>	Loheide	National Park Service	\$203,874 (\$203,874)	05/01/2011 - 04/30/2014	100%
<i>Fulbright Scholar:</i>				8/01/2014-	

<i>Ecohydrology for Sustainability</i>	Loheide	<i>Fulbright</i>	\$13,200	11/01/2014	100%
<i>WSC Cat-2: Climate change, shifting land use, and urbanization in a midwestern agricultural landscape: challenges for water quality and quantity</i>	Kucharik Loheide Rissman Carpenter Turner	National Science Foundation, Water Sustainability & Climate Program	\$4,911,961 (~\$1M)*	04/1/2011-03/31/2016	20%
<i>CAREER: Improving the science and practice of restoration with hydroecologic observatories</i>	Loheide	National Science Foundation, Enviro Sustainability & Hydrologic Sciences	\$404,734 (\$404,734)	01/15/2010 - 12/31/2015	100%
<i>LTER: Comparative study of a suite of lakes in Wisconsin</i>	Stanley (PI) (Loheide is one of 20+ co-PIs)	National Science Foundation	\$7,538,966 (N/A)	11/01/08-10/31/14	3%
<i>Water, sustainability, and green infrastructure: A model 21st century campus by 2025</i>	LaGro Harrington Ginder-Vogel Remucal Likos Loheide	UW- Madison, Office of Sustainability SIRE	\$50,000 (--)	7/1/13-6/30/14	10%
<i>Effects of nuanced changes in lot layout and impervious area connectivity on urban recharge</i>	Loheide	Wisconsin Groundwater Coordinating Council	\$72,977	07/01/12-06/30/14	100%
<i>Innovative approaches to treating stormwater</i>	Loheide Zedler Thompson	Environmental Protection Agency, Great Lakes Restoration Initiative	\$411,833 (\$134,696)	08/30/10-05/31/12	33%
<i>A Collaborative Proposal: mountain meadow restoration with changing climate</i>	Loheide Lundquist (Univ. of Wash.)	National Science Foundation, Enviro. Sustainability	\$425,000 (\$212,500)	09/01/07 – 09/01/11	50%
<i>Development and application of a user-</i>	Loheide	University of Wisconsin	\$25,824	03/1/2010-	100%

<i>friendly interface for predicting climate change induced changes in evapotranspiration</i>		Water Resources Institute	(\$25,824)	02/28/2011	
<i>Stormwater management facilities in the UW Arboretum: Education and outreach</i>	Loheide	Wal-Mart	\$56,000 (\$56,000)	11/13/09- 11/13/10	100%
<i>Stormwater management research facilities at the University of Wisconsin Arboretum</i>	Loheide	Wal-Mart	\$150,000 (\$150,000)	09/01/2007 - 08/31/2009	100%
<i>Science-based stormwater management facilities: The intersection of engineering, hydrology and ecology</i>	Zedler Loheide Thompson	University of Wisconsin Graduate School	\$63,226 (\$31,600)	07/1/08- 06/30/09	33%
<i>A restoration observatory: Quantifying changes in floodplain hydroecology</i>	Loheide	University of Wisconsin Graduate School	\$32,000 (\$32,000)	07/1/08- 06/30/09	100%
<i>A thermal remote sensing tool for mapping spring and diffuse groundwater discharge to streams</i>	Loheide	Wisconsin Groundwater Coordinating Council	\$68,672 (\$68,672)	07/01/07- 07/01/09	100%
<i>Teaching academy summer institute teaching grant</i>	Loheide	UW Teaching Academy Summer Institute	\$500 (\$500)	07/01/07- 06/30/2008	100%

**Funds are not separated by PI since all are at the same institution. Many of the personnel are jointly supervised and equipment is shared among PI's. Approximately 1/5 of the funds supported portions of the project for which Loheide is responsible.*

PROFESSIONAL SERVICE

Loheide is an engaged member of the academic community and is active in service activities at the departmental, college, university, national, and international levels. Within the department of Civil and Environmental Engineering, Loheide has served on the *Strategic Hiring Committee* for all years except his sabbatical during the post-tenure period. This committee helps determine the strategic direction of the department and has assisted with over a dozen search and screen processes during this time period. Loheide has not only helped to shape the department through these activities, but has taken a special interest in mentoring new hires. He currently serves on five mentoring committees for junior faculty and chairs one. Furthermore, he served as the *Civil and Environmental Engineering Assistant Professor Teaching Evaluator* in the department and serves as a formal and informal mentor for several early career hydrologists around the country and internationally. In addition, Loheide has served on the *Merit Review Committee* and chaired the *Website Committee* for CEE. He has served as faculty advisor for the Chi Epsilon Fraternity and the Association of Engineering Geologists.

Due to the interdisciplinary nature of Loheide's research, he is extraordinarily active in a wide range of teaching and research activities across the campus community. In addition to Civil and Environmental Engineering, he advises graduate students in the Geological Engineering (executive committee), Freshwater and Marine Sciences (past chair), Environmental and Resources, and Water Resource Management programs (executive committee). He has served on the Executive Committee of Wisconsin Ecology and was a founding member of Water@UW-Madison and is currently serving as chair. Because of his cross-disciplinary work, Loheide regularly serves on graduate student committees not only in his home department of Civil and Environmental Engineering, but also in Soils, Geoscience, Geological Engineering, Freshwater and Marine Sciences, Botany, Water Resources Management, Landscape Architecture, Forest and Wildlife Ecology and the Nelson Institute for Environmental Studies. Within the College of Engineering, Loheide has served on the *Safety Committee*, the *Engineering Hall Facilities Improvement Committee*, and the *10-yr review of the Environmental Chemistry and Technology Program*. Loheide has served on the *Graduate School's Physical Sciences Fellowship Committee* for the past eight years, the *Faculty Senate* and the *University Arboretum Committee*, which oversees management of this University Research Facility.

At a national and international level, Loheide is active in proposing, organizing, and chairing oral and poster sessions at international conferences such as the American Geophysical Union, European Geophysical Union, and Geological Society of America and has served as a member of the *AGU Ecohydrology Technical Committee*. Currently, Loheide is Chair of the CUAHSI (Consortium of Universities for the Advancement of the Hydrological Sciences, Inc) Biennial Colloquium: *Hydrologic Connections: Climate, Food, Energy, Environment, and Society*. Loheide is also a member of the *CUAHSI Board of Directors*, serves on the *Education and Outreach Committee* and is the leader and initiator of the CUAHSI Virtual University. He is also the university representative for the Universities Council on Water Resources.

Due to the interdisciplinary nature of his research, Loheide reviews manuscripts for a wide variety of disciplines as evidenced by the >25 different journals he has reviewed for. He also reviews proposals and serves on panels for local, regional, national, and international funding agencies including the National Science Foundation (Including the following programs: Environmental Sustainability, Frontiers in Earth System Dynamics, Hydrologic Sciences, IGERT, International Research Fellowship, CAREER Program, Arctic Sciences, and Collaboration in Mathematical Geosciences Programs, EPSCoR), NASA, Sea Grant, Indo-US Science and Technology Forum, Natural Environmental Research Council (UK), National Institutes for Water Resources, Maine Water Resource Institute,

USGS National Institutes for Water Resources, Army Research Office, WI Groundwater Coordinating Council, Qatar National Research Foundation, and the US Department of Energy. Loheide is one of five primary editors for Ecohydrology and an Associate Editor for Vadose Zone Journal.

Loheide is strongly committed to the Wisconsin Idea -- the principle that education should influence and improve people's lives beyond the university classroom. His goals in outreach are focused in two directions. First, he promotes public environmental awareness of issues at the interface between the natural and built environments amongst all ages and exposes younger generations to possible careers in environmental engineering and science. Second, he disseminates state-of-the-science research to restoration practitioners, natural resource managers, and policy makers so that the best available science can be applied to improving environmental quality. He accomplishes this through public and practitioner lectures and workshops, interviews, and lectures and field trips for middle school students.

Peer review

Associate Editor, Vadose Zone Journal, 2012- 2018

Associate Editor, Ecohydrology Journal, 2013-present

Manuscript review for journals (>200 articles reviewed):

- Applied Geography
- AGU Monograph Chapter
- Ecohydrology Journal
- Ecological Applications
- Ecological Engineering
- Environmental Evidence
- Engineering Geology
- Ground Water
- Geotechnical and Geological Engineering
- Geophysical Research Letters
- Hydrogeology Journal
- Hydrological Processes
- Journal of Arid Environments
- Journal of Environmental Management
- Journal of Geophysical Research-Biogeosciences
- Journal of Hydrology
- Journal of the American Water Resources Association
- Journal of Vegetation Science
- Methods for Estimating Natural Ground-Water Recharge Rates (Book chapter)
- Proceedings of the National Academy of Sciences
- Remote Sensing of Environment
- Restoration Ecology
- Soil Science Society of America
- Vadose Zone Journal
- Water Resources Research
- Wetlands

Ad hoc-proposal review (>75 proposals reviewed):

- National Science Foundation (Including the following programs: Environmental Sustainability, Frontiers in Earth System Dynamics, Hydrologic Sciences, IGERT, International Research Fellowship, CAREER Program, Arctic Sciences, and Collaboration in Mathematical Geosciences Programs, EPSCoR)
- NASA
- Sea Grant
- Indo-US Science and Technology Forum
- Natural Environmental Research Council (United Kingdom)
- National Institutes for Water Resources
- Maine Water Resource Institute
- USGS National Institutes for Water Resources
- Army Research Office
- Wisconsin Groundwater Coordinating Council Joint Solicitation
- Qatar National Research Foundation
- US Department of Energy
- German Research Foundation

Proposal review panels

- National Science Foundation, Environmental Sustainability CAREER Panel
- National Science Foundation, IGERT Panel
- National Science Foundation, INFIEWS Panel

Research site progress review panels

- National Science Foundation, Long-Term Ecological Research Site Review

Service at University of Wisconsin

Thesis and Dissertation Committees (not including own students)

Camilla Abe, PhD, 2021-202x
Josh Anderson, PhD, 2013-2016
Andrew Aslesen, MS, 2008-2010
Adam Bechle, MS, 2010
Adam Bechle, PhD, 2010-2015
Richard Becker, PhD, 2012-2014
Matthew C. Van de Bogert, PhD, 2006-2011
T. Matt Boyington, PhD, 2006-2009
Jennifer Breen, MS, 2017-2018
Rachel Breunig, PhD, 2020-202x
Josh Brown, MS, 2007-2010
Doug Brugger, MS 2013
Michael Busch, MS, 2018
Michele Cipiti, MS, 2008
Becky Carvin, MS, 2008
Catherine Christenson, PhD, 2019-
Heather Davis, MS, 2011-2013
Brad DeBels, PhD, 2011-2013
Justin Delorit, PhD, 2016-2018
Meg Dickhoff, MS, 2009-2010
James Doherty, PhD, 2010-2014
Kalina Dunkle, PhD, 2009-2012
Anna Fehling, MS, 2017-2019
Daniel Fletcher, MS, 2014
Mario Flores, PhD, 2007-2009
Phil Gaebler, MS, 2010
Chris Gellasch, PhD, 2009-2012
Matt Grzegorzewski, MS 2015
Samantha Hartke, PhD, 2019-
David Huwe, MS, 2009
Erika Ito, MS, 2019-2021, U Mass
Yanghui Kang, PhD, 2017-2020
Khurram S Khan, MS, 2009-2010
Khurram S Khan, PhD, 2010-2012
Maribeth Kniffen, MS, 2013
Chris Lowry, PhD, 2008
Hatice Okten, PhD, 2008
Stephanie Prellwitz, 2011-2012
Steve Powers, PhD, 2008-2012
Yi-Fang (Yvonne) Hsieh, PhD, 2006-2011
Nobuaki Kimura, PhD, 2006-2007
Kimie Lee, MS, 2007
Yang Yang, PhD, 2011-2015
Ying-Tien “Kevin” Lin, PhD, 2006-2012
Madiline Magee, PhD, 2013
Kiran Manchikanti, PhD, 2009
Melissa Motew, PhD, 2012- 2017
Jordan Muss, PhD, 2007-2012
Mallika Nocco, PhD, 2012-2017
Alex Norpel, MS, 2017
Steve Neary, PhD, 2012-2014
Kasper Toelbell Oestergaard, PhD, Univ of
Queensland, 2014
Hyunjun Oh, PhD, 2017-2020
Jeremey Patterson, PhD, 2018-
Stephanie Prellwitz, 2011-2012
Linea Rock, MS, 2019-2021
Ojaswee Shrestha, PhD, 2020-202x
Steve Sellwood, PhD, 2013-2015
Crystal Smith, MS, 2011
Aditya Singh, PhD, 2011-2013
Ammara Talib, PhD, 2018-
Hoi Lai Tseung, MS, 2010-2012
Jordan Read, 2010-2012
Laura Rozumalski, MS, 2006-2007
Dylan Voeller, MS, 2007
Jennifer Belknap Williams, MS, 2007
Luke Winslow, PhD
Yang Yang, PhD, 2012-2015
Gou Yu, PhD, 2018-2021
Hengliang (Henry) Yuan, PhD, 2007
Owen Zhu, MS, 2015

Departmental committees and other activities:

Environmental Chemistry and Technology Search and Screen Committee (2007-2008).
Geological Engineering Election Committee Co-Chair (2007).
Anna Birge Research Grant selection committee (2008-2009; 2011).
Weston Fellowship selection committee (2008).
Faculty advisor to Chi Epsilon (2009-2014, 2015-present).
Faculty advisor to AEG (Association of Engineering Geologists) club (2010-2014).
Environmental Chemistry Search and Screen Committee (2010-2011).
Geotechnical Search and Screen Committee (2016-2018).
Water Sustainability Search and Screen Committee chair (2012-2013)
Civil and Environmental Engineering Strategic Hiring Committee (2011-2014; 2015-2019)
Civil and Environmental Engineering Website Committee chair (2011-2014)
Civil and Environmental Engineering Elections Committee (2015-present)
Limnology and Marine Science Program Name Committee chair (2011)
Freshwater and Marine Sciences Program Chair (2012-2014)
Civil and Environmental Engineering Merit Review Committee (2012-2014)
Civil and Environmental Engineering Assistant Professor teaching evaluator (2013-2014)
Assistant Professor Mentor Committee: Christy Remucal (2012-2018)
Assistant Professor Mentor Committee: Paul Block (2013-2019)
Assistant Professor Mentor Committee (chair): Dan Wright (2016-2021)
Assistant Professor Mentor Committee: Pavana Prabhakar (2016-)
Assistant Professor Mentor Committee: Greeshma Gadikota (2017-2018)
Assistant Professor Mentor Committee (chair): Nimish Pujara (2018-)
Environmental Science & Engineering Division Chair (2019-2021)
Civil and Environmental Engineering Operations Committee (2019-2021)

College committees and other activities:

College of Engineering Safety Committee (2016-2021)
Byron Bird Award Selection Committee (member 2010, chair 2011)
Engineering Hall Improvements Committee (2013-2014)

Other activities external to college:

Nelson Institute for Environmental Studies, ad hoc Committee for International Water Governance program development (2018-2019)
Department of Geoscience, Hydrogeology Search and Screen Committee (2018-)
Environmental Chemistry and Technology 10-yr Review (2017)
Faculty Senate Alternate for Chin Wu (2007-2009)
Faculty Senate (2010-2013)
University of Wisconsin Sustainability Taskforce, Campus Environment Subcommittee, (2010)
Department of Geoscience, Hydrogeology Search and Screen Committee (2010- 2011)
Graduate School's Physical Sciences Fellowship Committee (2011-2014, 2016-2018)
Arboretum Committee (2012-2014)
Water Resource Management Program Committee (2012-present)

Executive Committee Wisconsin Ecology (2015-2017)
Executive Committee Water@UW-Madison (2016-present; chair 2017-2018, past chair 2018-2019)
Water Sustainability Cluster Hire Lead (2019-2020)
Anna Grant Birge Grant Selection Committee (2021)

Other Professional Activities

Water Needs for GDEs: Quantifying vegetation use of and dependence on groundwater

In collaboration with Christine Albano (Desert Research Institute) and Laurel Saito (The Nature Conservancy in Nevada), we are running stakeholder engagement workshops to understand the needs of water managers, conservationists, and professionals in the energy sector in terms of incorporating the water requirements of groundwater dependent ecosystems in their management activities. We have participation and support from eleven federal, state, and local agencies with responsibilities for water rights allocations (NV Division of Water Resources), water or energy delivery (South Tahoe Public Utilities District, Placer County, Truckee Meadows Water Authority, Carson Water Subconservancy District, NV Energy), and species and habitat management, monitoring, and protection (Inyo County Water, U.S. Fish and Wildlife Service, U.S. Forest Service, NV Dept. of Wildlife, NV Division of Natural Heritage).

CUAHSI (Consortium of Universities for the Advancement of the Hydrologic Sciences, Inc) Board of Directors (2016-present), Executive Committee (2018), Chair-Elect (2019), Chair (2020), Past-Chair (2021)

The CUAHSI Board of Directors oversees the activities of the consortium. Full power in the management of the corporation rests with the Board. The Board is composed of 15 Directors drawn from the representatives of our member universities. Each year, the membership elects five Directors, each for a three - year term. The CUAHSI Board of Directors meets monthly to conduct consortium business and other times as needed. I also serve as liaison to the community and to the Education and Outreach Standing Committee. I organized and chaired the 2018 CUAHSI Biennial, July 30-Aug 1, 2018 at the National Conservation Training Center (NCTC) in Shepherdstown, West Virginia. The theme of the Symposium is: *Hydrologic Connections: Climate, Food, Energy, Environment, and Society*.

I have led and organized inter-university online courses to enhance the depth and breadth of graduate course offerings at universities across the nation, increase the rate of uptake of new research and facilitate networking among our hydrologic community. The format of the course is designed to give students flexibility to select the three topics most relevant to them from a list of Specialized Online Hydrology Course (SOHC). Modules are being offered by leading faculty in these specialized research niches from across the country. Each SOHC module, which is equivalent to one-third of a semester course, is designed to facilitate interaction among the instructor and students and contains some evaluation elements (problem sets, projects, presentations, exams etc.). The instructor at each student's home university will assign a grade based on the student scores and class distribution provided by the SOHC module instructor.

Sierra Meadows Technical Advisory Committee (TAC):

I was a member of Sierra Meadows Technical Advisory Committee (TAC) organized by American Rivers through a partnership with the National Fish and Wildlife Foundation to support the foundation's \$200 million dollar keystone initiative on the restoration of meadows of the Sierra Nevada. Our nine person TAC was tasked with providing guidance on the following four elements: 1. Develop a standard method to assess meadow condition and degradation, 2. develop and test methods to prioritize meadows for restoration in two watersheds, 3. describe and evaluate existing meadow restoration and rehabilitation techniques, and 4. recommend a core set of short and long-term measurements to monitor the impacts of meadow restoration across projects.

Wisconsin Initiative on Climate Change Impacts Water Resources Working Group:

I was a member (2009-2014) of the Wisconsin Initiative on Climate Change Impacts Water Resources Working Group, which includes participants from several agencies and organizations, including the Wisconsin Department of Natural Resources, University of Wisconsin System, U.S. Geological Survey, and the Wisconsin Wetlands Association. The Water Resources working group is assessing and synthesizing climate change impacts to Wisconsin's water resources, which will assist in the development of adaptation strategies for dealing with those impacts. The group is primarily focusing on understanding the implications of a changing climate for inland water levels and flows, including lakes, rivers, wetlands, stream baseflows, and groundwater.

Badger Ridge Middle School Outreach Program:

Loheide has been involved in an outreach program with Badger Ridge Middle School. This program addresses the problem that middle school students are not as strong in science and mathematics as students from other countries and are largely unaware of career options in environmental engineering and science. Today - as global population grows, climate changes, natural resources become limited, and scientific advances raise ethical concerns – it is more important than ever that the public understand the technological underpinnings of our society. Science, Technology, Engineering, and Mathematics (STEM) fields form the foundation for creating an informed public and are viewed as key to maintaining US competitiveness in a global market [National Academy of Engineering, 2005]. The STEM fields are also essential to developing a more seamless interface between the natural and built environments and achieving sustainability of both ecosystems and natural resource usage.

I have participated in this outreach program to introduce 6th grade students to environmental science and engineering with Trina McMahon and Joel Pederson. In 2007 and 2008, I taught lessons on groundwater to three 6th grade classes (~75 students) at Badger Ridge Middle School in Verona. In most subsequent years, we changed the format of this program and all 6th grade classes visited the University of Wisconsin, Department of Civil and Environmental Engineering Laboratories to learn about career opportunities in science and engineering. During their visit, I performed demonstrations and taught lessons on groundwater.

In May 2011, I led a field trip for ~50 6th grade students from Badger Ridge Middle School to our East Branch Pecatonica Restoration Observatory. At the site we discussed the land-use practices in the watershed that had degraded the wetland and the restoration activities that had been performed at the floodplain. We led the students through a series of hands-on activities including a groundwater flow simulation tank, a demonstration of streamflow measurement techniques, an installation of wells and characterization of soils and an inventory of introduction to sampling invertebrates and amphibians in aquatic environments. The goal of the trip was to expose the students to field research, which is an underemphasized area of science and engineering.

Yosemite National Park Outreach Workshops:

Interpretive Park Rangers provide the primary connection between visitors to National Parks and the researchers working in them. However, the interpretive rangers have little time to keep up with the latest research findings and distill them into manageable programs such as interpretive walks and campfire talks. Along with his collaborator Jessica Lundquist from the University of Washington, the candidate prepared a workshop for Park Rangers to update them on their latest research findings on the effects of climate change and restoration in Tuolumne Meadows. (Workshop, Tuolumne Meadows, Yosemite, CA, June 2008.) This workshop updated rangers on research results and worked with interpretive rangers to find ways in which our science could be incorporated in ranger-led interpretative walks. We also provided a time-lapse video display for the visitor center documenting the spring snowmelt and meadow flooding which occurs in Tuolumne Meadows. This workshop was followed up with a more technical talk at the Yosemite Forum in 2010 for National Park Service employees. Many of the results presented there formed the basis for the “Meadows” web page on Yosemite National Park’s Nature and Science Section. <http://www.nps.gov/yose/naturescience/meadows.htm>

American Geophysical Union Hydrology Section:

Outstanding Student Awards Committee 2008-2011 (arranged judging for ~700 student presentations/year at AGU meetings, select best student presentation award winners based on scoring and written comments)

Ecohydrology Technical Committee 2013-2016; 2018-present

International Association of Hydrological Sciences:

I served on the International Association of Hydrological Sciences (IAHS) Task Force to formulate a new scientific decade initiative. We gathered feedback on the direction of this initiative from the hydrologic community.

Membership in professional societies:

- Universities Council on Water Resources (UCoWR), UW-Madison representative, 2015-
- Consortium of Universities for the Advancement of Hydrologic Science, Inc. (CUAHSI), UW-Madison representative, 2015-
- American Geophysical Union
- Geological Society of America
- Ecological Society of America (2008)
- National Groundwater Association
- Wisconsin Wetland Association
- Wisconsin Section of the American Water Resource Association
- Golden Key National Honor Society
- Society for Freshwater Science
- Chi Epsilon Civil Engineering Honor Society

Other professional committees:

- University of Northern Iowa Department of Earth Science Advisory Committee (2006-2016)

- Lakeshore Preserve Board of Directors Nomination Committee (2019)

Conference participation and organization

Organized and chaired a session titled “General Ecohydrologic Contributions” at the 2019 annual meeting of the American Geophysical Union.

Organized a session titled “Urban Ecohydrology: New Concepts, Observations, and Models” at the 2019 annual meeting of the American Geophysical Union.

Organized and chaired a session titled “General Ecohydrologic Contributions” at the 2018 annual meeting of the American Geophysical Union.

Organized and chaired the 2018 CUAHSI Biennial, July 30-Aug 1, 2018 at the National Conservation Training Center (NCTC) in Shepherdstown, West Virginia. The theme of the Symposium is: *Hydrologic Connections: Climate, Food, Energy, Environment, and Society*.

Organized as session titled “Groundwater Influenced Ecosystems: Springs, gaining streams, and terrestrial ecosystems” at the 2017 Annual Meeting of the Geological Society of America.

Chaired a session titled “Groundwater-Surface Water Interactions: Physical, Biological, and Chemical Relevance” at the 2013 annual meeting of the American Geophysical Union.

Presided over a session titled “Climate Change and Wisconsin’s Water Resources” at the 2011 Annual Meeting of the Wisconsin Section of the American Water Resources Association.

Co-organized a technical session titled “Ecohydrology of Groundwater-Dependent Ecosystems” at the 2010 American Geophysical Union Annual Meeting, San Francisco, CA.

Co-organized a technical session titled “Hydrology and Ecology interfaces: processes and interactions in wetland, riparian and groundwater-based ecosystems” at the 2009 European Geophysical Union General Assembly, Vienna, Austria.

Co-organized a technical session titled “Wetland ecohydrology: interactions and feedbacks between water table, soil moisture, and vegetation” at the 2008 European Geophysical Union General Assembly, Vienna, Austria.

Co-organized and chaired a technical session titled “Ecohydrology of Riparian Areas” at the 2007 Annual Meeting of the Geological Society of America. Introduced NGWA Darcy Lecturer: Jim J. Butler Jr.

Presided over a session titled “Advances in Water Monitoring and Remediation” at the 2007 Annual Meeting of the Wisconsin Section of the American Water Resources Association.

Presided over a session titled “Watershed Characterization” at the 2006 Fall Meeting of the American Geophysical Union.

Invited Public Lectures and Scientific Presentations

Loheide, II SP. Ecohydrology for Sustainability, Weston Sustainability Lecture Series, University of Wisconsin, September 19, 2013.

Loheide, II SP. Development and Application of a User-Friendly Interface for Predicting Climate Change Induced Changes in Evapotranspiration, Wisconsin Groundwater Coordinating Council, August 2, 2013.

Loheide, II SP. The Hydroecology of Meadows in the Sierra Nevada, CA. Wisconsin Public Television, University Place. 50-minute programming, 2009.

Loheide, II SP. The Hydroecology and Restoration of Meadows in the Sierra Nevada, CA. Yosemite Forum, Yosemite National Park, CA. Public lecture to park staff, volunteers and visitors. August 10, 2010.

Deitchman RS, Loheide SP II, Thermal Remote Sensing of Stream Temperature and Groundwater Discharge: Applications to Hydrogeology and Water Resources Policy in the State Of Wisconsin, Meeting of Wisconsin Groundwater Coordinating Council May, 8, 2009.

Booth EG, SP Loheide II, Pecatonica River Watershed Summit, *Riparian Corridor Management* to a diverse audience including Federal and State natural resources management agencies, non-profit organizations, and private landowners, Monroe, WI. March 29, 2008.

Deitchman RS, SP Loheide, *Thermal Remote Sensing of Groundwater Discharge in the Allen Creek Watershed* Talk to Friends of Allen Creek Watershed (FACW), Ft. Atkinson, Wisconsin Public Library, September 9, 2008.

Loheide SP II. *The Ecohydrology of the Last Chance Meadow System: Preliminary Results*, Feather River Coordinated Resource Management Group, Quincy Public Library, Quincy CA, April 13, 2005.

Presentations at UW

Loheide SP II, *Interactions between groundwater, soils, and food systems*, Soil Science Seminar, February 2019

Loheide SP II, *Ecohydrologic interactions between agriculture, forests, and urban areas*, Climate, People and the Environment Program Seminar, October 2017

Loheide SP II, *Urban Ecohydrology: The effect of cities on hydrologic and ecologic processes*, Water@UW-Madison Spring Symposium, May 2017.

Loheide II SP, 2013. *Ecohydrologic Research For Sustainability: Informing Decision Making*. Weston Roundtable Seminar.

Loheide II SP, *Groundwater, soil moisture, and vegetation interactions in wet meadows of the Sierra Nevada*, University of Wisconsin Department of Atmospheric Sciences, 2010.

Loheide II SP, *Linkages between hydrology and ecology on floodplains*, Environmental Engineering Seminar, March 24, 2009.

Loheide II SP, *Hydrologic Fluctuations in Riparian Wetlands: Ecologic Implications*, Environmental Chemistry and Technology Seminar, 2009.

Loheide II SP, EG Booth EG, *Ecohydrogeomorphology: Opportunities for Restoration and Science in the Driftless Area of WI*, Presentation to Geological Engineering Club, 2010.

Loheide II SP, *Acknowledging and Quantifying Ecosystem Water Needs*. Agroecology Seminar Series (Peak Water: The Future of Food in a Thirsty World). November 4, 2007.

Loheide II SP, *Remote Sensing of Meadow Hydroecology*. UW-SIAC (Spatial Information & Analysis Consortium) Lunchtime Lecture. September 14, 2007

Loheide II SP, *Vegetation Patterning: Meadow Restoration in the Sierra Nevada*, Hydrogeology Seminar, Department of Geology and Geophysics. November, 27, 2006.

Loheide II SP, *Modeling the Distribution of Meadow Vegetation: Connections with Ground and Surface Waters*, Limnology and Marine Science Seminar, January 24, 2007.

Interviews

Booth EG and Loheide SP, Wisconsin Public Radio (Lake Effect): *Eco Restoration* interview by Mitch Teich.