

CURRICULUM VITAE OF JONATHAN W.F. REMO

I. PROFESSIONAL AFFILIATION AND CONTACT INFORMATION

A. Present University Department or Unit:

Department of Geography and Environmental Resources

B. Office Address:

1000 Faner Drive, Room 4531

Carbondale, Illinois 62901

Southern Illinois University

Carbondale, IL 62901

E-Mail: diamict@siu.edu

II. EDUCATION

Southern Illinois University, Carbondale, Carbondale, IL
Doctor of Philosophy, Environmental Resources and Policy
Concentration: Earth and Environmental Processes
Received December, 2008

West Virginia University, Morgantown, WV
Master of Science, Geology / Geomorphology
Received August, 1999

Edinboro University of Pennsylvania, Edinboro, PA
Bachelor of Science, Geology; Minor in Geography
Received May, 1997

III. PROFESSIONAL EXPERIENCE

July 2017 to Present
Associate Professor, Department of Geography and Environmental Resources, Southern Illinois University, Carbondale

August 2012 to July 2017
Assistant Professor, Department of Geography and Environmental Resources, Southern Illinois University, Carbondale

January 2009 to August 2012
Post-Doctoral Researcher, Department of Geology, Southern Illinois University, Carbondale

January 2004 to December 2008

Graduate Researcher, Department of Geology, Southern Illinois University, Carbondale

August 1999 to January 2004

Engineer/Scientist I, Shaw Environmental and Infrastructure, Knoxville, Tennessee

IV. RESEARCH AND CREATIVE ACTIVITY

A. Interests and Specialties:

The common thread in my academic and professional careers has been the assessment and quantification of human impacts on water resources. Within the broad field of water resources my research interests lie within four major themes: river science, river management, flood hazard assessment, and mitigation. Areas of specialization include fluvial geomorphology, hydrology, hydraulic modeling, river management, disaster-mitigation planning, and disaster-loss modeling.

B. Current Projects:

June 2014 – December 2018 Tree-ring Reconstruction of Flood Dynamics on the Mississippi River and Principal Tributaries, National Science Foundation, Geography and Spatial Sciences. \$296,876, Co-PI

September 2017 – October 2020 Potential for conservation lands in Middle Mississippi River floodplains to mitigate flood flows for ecosystem services. U.S. Fish and Wildlife Service. \$233,520, Co-PI

C. Grants Applied for:

Not Funded

October 2017 – September 2018 NSF Rapid Response Research (RAPID) Collaborative: Lessons from Harvey: Evaluating the Effectiveness of Flood-Mitigation Policies for Flood-Loss Reduction. \$89,780, Co-PI

\$599,700 A transdisciplinary framework for incorporating multiple ecosystem services in decision making: A floodplain management case study. U.S. Environmental Protection Agency's STAR Integrating Human Health and Well-Being with Ecosystem Services RFP, (2016) PI

\$396,500 Evaluating Strategic Floodplain Reconnection as a Sustainable Management Strategy, National Science Foundation's Geography and Spatial Sciences Program (2015) PI

\$ 9,519 A Multidisciplinary Approach to Illinois River Floodplain-Reconnection Modeling, Illinois Water Resource Center / U.S. Geologic Survey (2014) PI

\$1,490,000 Strategic Floodplain Reconnection for a Non-Stationary World, National Science Foundation, National Science Foundation Dynamic Coupled Natural and Human Systems (CNH) Program, (2013) Lead-PI

\$ 513,292 Cook County Multi-Hazard Mitigation Plan (2013) Co-PI

\$197,000 Testing effects of river training structures on flow dynamics, flood levels, and physical habitat. National Science Foundation's Hydrologic Sciences (2013) Co-PI

\$ 287,000 - Effect of River Training Structures on Flow Dynamics, Flood Levels, and Physical Aquatic Habitat. National Science Foundation's Hydrologic Sciences. (2011) Co-PI

\$275,000 Strategic floodplain reconnection using stacked ecosystem services. National Science Foundation's Geography and Spatial Sciences Program. (2011) Co-PI

D. Grants Received and Completed:

\$155,000 Illinois Statewide Flood Exposure Assessment. Dates Funded (January 2013 to August 2013) PI.

\$30,000 Assessing 21st Century Changes in Flood Risk Related to Climate Change Along the Upper Mississippi River, USA. National Commission on Energy Policy. (November 2009 to August 2012)

\$27,000 - Development of a virtual hydrologic and geospatial data repository for the Mississippi River System. U.S. Geological Survey. (May 2007 to September 2007)

E. Honors and Awards:

American Association for the Advancement of Science, 2018-2019 Executive Branch Science and Technology Policy Fellowship Awardee (\$120,000 – stipend and travel)

Illinois Association of Floodplain and Stormwater Managers (IAFSM), State of Illinois Mitigation Award 2012 (Co-awardee with Beth Ellison and Jen Dierauer, SIU, Natural Hazards Research and Mitigation Group). March 2012

HAZUS User of the Year 2010, Federal Emergency Management Agency. July 2010

Outstanding Graduate Researcher Award, Southern Illinois University, Carbondale. April 2008 (\$1,000 Award)

Southern Illinois University Dissertation Research Award: Utilizing archival data to assess historic change in flood flow conveyance of the Mississippi River. May 2007 (\$20,000 Award)

International Association of Mathematical Geology Student Grant Award:
The use of retro-modeling to assess the effect of river engineering on Lower Mississippi River Flood Stages August 2006 (\$2,000 Award)

Southeast Section Geological Society of America Research Grant
The Structural and Lithologic Controls on Mass Movement in the New River Gorge, West Virginia. April 1998 (\$500 Award)

F. Papers and Presentations at Professional Meetings (Selected):

* denotes my student, ^x Invited Talk, ^{xx} Peer Reviewed Conference Paper

*Krienert, J.M., Remo, J.W.F., Lefticariu, L., 2018. Evaluating Nitrogen Transport in a Hydrologically Connected Wetlands of the Mississippi River. Geological Society of America Annual Meeting, Indianapolis, Indiana

Remo, J.W.F., 2018. Sedimentation within the batture lands of the middle Mississippi River, USA Mississippi River Research Consortium Proceedings, v. 50, April 25-26, La Crosse Wisconsin.

Remo, J.W.F., and Therrell, M., 2018. Estimating discharges for historic floods along the middle and lower segments of the Mississippi River. Annual American Association of Geographers Conference, April 9th to 13th, New Orleans, Louisiana

Remo J.W.F., and *Ryherd J., 2017. Sedimentation within the batture lands of the middle Mississippi River, USA American Geophysical Union Fall Meeting, New Orleans, LA

Remo J.W.F and *Ryherd, J. 2017. The Importance Understanding Geomorphic Process within Batture Lands in the Pursuit Sustainable River Management, a Middle Mississippi River Case Study. Annual American Association of Geographers Conference, Boston, Massachusetts

Remo, J.W.F., *Ross, J. and Therrell, M., 2016. Bridging the Gap between the Paleo- and Historical- Flood Record of the Mississippi River: Assessment of Dams, Levees, and Other Sources of Non-stationarity. Geological Society of America Annual Meeting. September 25th to 28th Denver, Colorado.

Remo, J.W.F., *Ross, J. and *Guida, R., 2016. Developing the Long View of the Mississippi River's Flood History: Holocene "Megafloods" to Yesterday. Geologic Society of America North- Central Section Meeting. April 18-19. Urban-Champaign, Illinois.

^xRemo, J.W.F. *Rushing A., and *Guida R.J., 2015. Hydro-geomorphic Considerations for River-Floodplain Reconnection within the Mississippi River Basin, USA. The Second Mississippi-Yangtze River Basins Symposium. October 14th to 17th Wuhan, China

Remo, J.W.F. *Rushing A., and *Guida R.J., 2015. Hydro-geomorphic Considerations for River-Floodplain Reconnection Along the Lower Illinois River, USA. The 4th Biennial Symposium of the International Society for River Science, La Crosse, Wisconsin.

Remo, J.W.F, Secchi, S., *Guida, R.J. and *Rushing A., 2015. Strategic Floodplain Reconnection for improving Flood Resilience of Illinois River Floodplain Communities. Annual American Association of Geographers Conference, Chicago, Illinois.

Remo, J.W.F, Secchi, S., *Guida, R.J., 2014. Strategic Floodplain Reconnection for Large River Rehabilitation. Illinois Water 2014, Urbana, Illinois, October.

Remo, J.W.F and *Guida, R.J., 2014. Guiding Large River Management using Retro- and Scenario Modeling. 2nd International Conference on the Status and Future of the World's Large Rivers, Manaus, Amazon, Brazil, July.

Remo, J.W.F, *Mahgoub, M., Ellison E., Pinter, N., 2014, Assessing Statewide Flood Vulnerability in Illinois. Annual American Association of Geographers Conference, Tampa Florida.

^{xx} Huthoff, F., Barneveld, H., Pinter, N., Remo, J., Eereden, H., 2013. Optimizing design of river training works using 3-dimensional flow simulations. Smart Rivers 2013, September 23-27 Liege, Belgium.

^xRemo, J.W.F, 2013, A Brief History of the Mississippi River's Physical Template. 2013. American Fisheries Society Annual Meeting, September 8-12, Little Rock, Arkansas.

Remo, J.W.F, Ellison E., 2013, Assessing Statewide Flood Vulnerability in Illinois Using HazusMH. Hazus-MH User Conference - 6th Annual HAZUS Conference, August 23rd -25th, 2013. Indianapolis, Indiana.

Remo, J.W.F, 2013 Do River-Training Structures Enhance Physical Aquatic Habitat? Mississippi River Research Consortium Proceedings, v. 45, April 24-26, La Crosse Wisconsin.

Remo J.W.F. and Pinter, N., 2012. Assessment of chevron dikes for the enhancement of physical-aquatic habitat within the Middle Mississippi River, USA. 2012 American Geophysical Union Fall Meeting, San Francisco, CA

Remo, J.W.F., Pinter, N., Brand, J., Huthoff, F., 2012. Towards a Room for the Rivers Policy in the USA. Association of State Floodplain Mangers 2012 Annual National Conference, San Antonio, Texas.

^{xx} Huthoff, F., Remo J.W.F., Pinter, N., 2012. Hydrodynamic Levee-Breach and Inundation Modeling of a Levee District along the Middle Mississippi. *in* Loucks, E.D.(Ed.), World Environmental and Water Resources Congress 2012: Crossing Boundaries. American Society of Civil Engineers. doi.org/10.1061/9780784412312.143

Remo, J.W.F., Carlson, M., Pinter, N., 2012. Hydraulic and flood-loss modeling of floodplain management strategies along the Middle Mississippi River, USA. American Water Resources Association Spring Specialty Conference on GIS and Water Resources VII, in New Orleans, LA, March 26-28, 2012.

^{xx} Remo, J.W.F, Pinter, N., 2007. The use of spatial systems, historic remote sensing and retro-modeling to assess man-made changes to the Mississippi River System. *in*: Zaho, P. et al. (Eds.), Proceedings of International Association of Mathematical Geology 2007 Geomathematics and GIS Analysis of Resources, Environment and Hazards. State Key Laboratory of Geological Processes and Mineral Resources, Beijing, China, pp. 286-288.

^{xx} Remo, J.W.F. and Kite, J.S., 1999. Geologic Controls on Landslides in the New River Gorge, West Virginia, *in*: New River Symposium Proceedings, April, 15-16, Boone, North Carolina, p. 87-97

G. Other:

V. PUBLICATIONS AND CREATIVE WORKS

A. Books: (None)

B. Articles in Professional Journals: (* denotes my student)

1. Munoz S.E., Giosan L., Therrell, M.D., Remo, J.W.F., Shen Z., Sullivan, R.M., Wiman, C., O'Donnell, M., Donnelly, J.P. 2018. Mississippi River flood hazard amplified by climate variability and river engineering, *Nature*. v. 556, 95–98. [doi:10.1038/nature26145](https://doi.org/10.1038/nature26145)
2. Remo, J.W.F., *Ryherd, J.K., Ruffner, C.M. Therrell, M.D. 2018. Temporal and spatial patterns of sedimentation within the batture lands of the middle Mississippi River, USA. *Geomorphology*. 308, 12-141. doi.org/10.1016/j.geomorph.2018.02.010

3. Remo, J.W.F., Ickes, B.S., *Ryherd, J.K., *Guida, R.J., Therrell, M.D. 2018. Assessing the impacts of dams and levees on the hydrologic record of the Middle and Lower Mississippi River, USA. *Geomorphology*. 33, 15, 88-100
doi.org/10.1016/j.geomorph.2018.01.004
4. McClain S. Bruch, C., Secchi S., and Remo J.W.F., 2017. What Does Nature Have to Do with It? Reconsidering the Distinctions in Policy Frameworks for Disaster Response to Natural and Man-made Disasters in the Danube Basin. *Natural Hazards and Earth Systems Science*. 17, 2151-2162. doi.org/10.5194/nhess-17-2151-2017
5. Remo J.W.F., *Guida R.J., Secchi S., 2017, Screening the Suitability of Levee Protected Areas for Strategic Floodplain Reconnection along the LaGrange Segment of the Illinois River, USA. *River Research and Application*. 33: 6, 1535-1467.
[dx.doi:10.1002/rra.3055](https://dx.doi.org/10.1002/rra.3055)
6. *Guida R.J., Remo J.W.F, Secchi S., 2016. Tradeoffs of Strategically Reconnection Rivers to their Floodplains: The Case of the Lower Illinois River (USA). *Science of the Total Environment*. 572: 43-55. doi.org/10.1016/j.scitotenv.2016.07.190
7. *Guida R.J., Remo J.W.F, Secchi S., 2016. Applying geospatial tools to assess the agricultural value of Lower Illinois River floodplain levee districts. *Applied Geography* 74: 123-135. [doi: 10.1016/j.apgeog.2016.07.002](https://doi.org/10.1016/j.apgeog.2016.07.002)
8. *Kozak J.P., Bennett M.G., Piazza B.P., Remo J.W.F., 2016. Towards dynamic flow regime management for ecosystem restoration in the Atchafalaya River, Basin, Louisiana. *Environmental Science and Policy* 64, 118-128.
doi.org/10.1016/j.envsci.2016.06.020
9. Remo J.W.F., Henie R.A., Ickes B.S., 2016, Particle Size Distribution of Main Channel Bed Sediments along the Upper Mississippi River, USA. *Geomorphology*. 246,118-131.
[doi:10.1016/j.geomorph.2016.04.012](https://doi.org/10.1016/j.geomorph.2016.04.012)
10. Pinter N., Huthoff, Dieraurer J., Remo, J.W.F. Dampitz, A., 2016, Modeling residual flood risk behind levees, Upper Mississippi River, USA, *Environmental Science and Policy*. 58, 131-140, doi.org/10.1016/j.envsci.2016.01.003
11. Remo J.W.F., Pinter N., *Mahgoub M., 2015, Assessing Illinois's Flood Vulnerability Using Hazus-MH. *Natural Hazards*. 81, 265-287. [doi:10.1007/s11069-015-2077-z](https://doi.org/10.1007/s11069-015-2077-z)
12. Huthoff, F., Remo, J.W.F., Pinter, N., 2015, Hydrodynamic levee-breach and inundation modeling of the Metro East Levee Cell, Middle Mississippi River, *Journal of Flood Risk Management*. dx.doi.org/10.1111/jfr3.12066

13. *Guida R.J., Swanson, T.L., Remo, J.W.F., Kiss, T. 2015, Strategic Floodplain Reconnection for the Lower Tisza River, Hungary: Opportunities for Flood-height Reduction and Floodplain-wetland Reconnection. *Journal of Hydrology*. [doi:10.1016/j.jhydrol.2014.11.080](https://doi.org/10.1016/j.jhydrol.2014.11.080)
14. Schoof, J.T., Heern, Z.A., Therrell, M.D., Remo, J.W.F. 2014, Assessing trends in lower tropospheric heat content in the Central USA using equivalent temperature. *International Journal of Climatology*. [doi:10.1002/joc.4175](https://doi.org/10.1002/joc.4175)
15. Huthoff, F., Pinter, N., Remo, J.W.F., 2014, Closure to “Theoretical analysis of wing dike Impact on River Flood Stages”. *Journal of Hydraulic Engineering*. [10.1061/\(ASCE\)HY.1943-7900.0000931](https://doi.org/10.1061/(ASCE)HY.1943-7900.0000931)
16. Remo, J.W.F., *Khanal, A., Pinter, N., 2013, Assessment of chevron dikes for the enhancement of physical-aquatic habitat within the Middle Mississippi River, USA. *Journal of Hydrology*. 50, 146-162. dx.doi.org/10.1016/j.jhydrol.2013.07.007
17. Huthoff, F., Pinter, N., Remo, J.W.F., 2013, Theoretical analysis of stage magnification caused by wing dikes, Middle Mississippi River, USA. *Journal of Hydraulic Engineering*. 139(5), 550–556. [dx.doi.org/10.1061/\(ASCE\)HY.1943-7900.0000698](https://dx.doi.org/10.1061/(ASCE)HY.1943-7900.0000698)
18. Remo, J.W.F. and Pinter, N., 2012. Hazus-MH Earthquake Loss Modeling Estimates in the Central United States, *Natural Hazards*. [DOI 10.1007/s11069-012-0206-5](https://doi.org/10.1007/s11069-012-0206-5)
19. Pinter, N. Dierauer, J., and Remo J.W.F., 2012. Flood-loss modeling for assessing impacts of flood-frequency adjustment, Middle Mississippi River, USA. *Hydrological Processes*. [doi:10.1002/hyp.9321](https://doi.org/10.1002/hyp.9321)
20. Dierauer, J., Pinter, N., and Remo J.W.F., 2012. Evaluation of levee setbacks for floodloss reduction, Middle Mississippi River. *Journal of Hydrology*. [doi:10.1016/j.jhydrol.2012.05.044](https://doi.org/10.1016/j.jhydrol.2012.05.044)
21. Remo, J.W.F., Larson, M., Pinter, N. 2012, Hydraulic and Flood Loss Modeling of levee, floodplain, and river management strategies, Middle Mississippi River, USA. *Natural Hazards*. [doi:10.1007/s11069-011-9938-x](https://doi.org/10.1007/s11069-011-9938-x)
22. Flor, A., Pinter, N., Remo, J.W.F., 2011. The ups and downs of levees: GPS-based change detection, Middle Mississippi River USA. *Geology*. dx.doi.org/10.1130/G31493.1
23. Flor, A., Pinter, N., Remo, J.W.F., 2010. Evaluating levee failure susceptibility on the Mississippi River using logistical regression analysis. *Engineering Geology*. [doi:10.1016/j.enggeo.2010.08.003](https://doi.org/10.1016/j.enggeo.2010.08.003)

24. Pinter, N. Jemberie A. A., Remo J.W.F, Heine, R.A., Ickes B.S. 2010. Cumulative Impacts of River Engineering, Mississippi and Lower Missouri Rivers. River Research and Applications. [doi: 10.1002/rra.1269](https://doi.org/10.1002/rra.1269)
25. Remo, J.W.F., Pinter, N., Heine, R.A. 2009. The use of retro- and scenario- modeling to assess effects of 100+ years river engineering and land cover change on Middle and Lower Mississippi River flood stages. Journal of Hydrology. doi:[doi.10.1016/j.jhydrol.2009.07.049](https://doi.org/10.1016/j.jhydrol.2009.07.049)
26. Pinter, N., A. A. Jemberie, Remo, J.W.F., Heine R.A., Ickes, B.S. 2008. Flood trends and river engineering on the Mississippi River system, Geophysical Research Letters, 35, L23404, [doi:10.1029/2008GL035987](https://doi.org/10.1029/2008GL035987).
27. Remo, J.W.F., Pinter, N., Ickes, B. S., Heine, R. 2008. New Databases Reveal 200 Years of Change on the Mississippi River System. Eos: Transactions of the American Geophysical Union 89, 14, 134-135.
28. Jemberie, A. A., Pinter, N., Remo, J.W.F. 2008. Hydrologic history of the Mississippi and Lower Missouri Rivers based upon a refined specific-gage approach. Hydrological Processes [doi:10.1002/hyp7046](https://doi.org/10.1002/hyp7046)
29. Remo, J.W.F., Pinter, N. 2007. Retro modeling the Middle Mississippi River. Journal of Hydrology. [doi:10.1016/j.jhydrol.2007.02.008](https://doi.org/10.1016/j.jhydrol.2007.02.008)

Paper in Review, Revision or Prep:

McClain S. Bruch, C., Secchi S., and Remo J.W.F., *in Review*, From Integrated Water Resources Management to resilience: Implications for a new paradigm. International Journal of Water Resources Development

Hayden-Lesmeister, A., Remo, J.W.F., Piazza, B.P., Huthoff, F., *in Review*, Hydraulic modeling to evaluate connectivity enhancement in the Atchafalaya River Basin. River Research and Applications

C. Creative Contributions: (None)

D. Chapters in Professional Books:

1. Wagner, M.J., Remo, J.W.F., Sharp, K. 2018. The Power of Place Prehistoric Ritual Landscapes in Southern Illinois. *in* Pauket P.T. and Koldehoff B.H. eds. New Perspectives on Science, Religion and Archaeology, Alabama University Press.
2. Wagner, M.J., Sharp, K., Remo, J.W.F., 2018. Transformed Spaces: A Landscape Approach to the Mississippian Period Rock Art of Illinois. *in* Oxbow Press

3. Remo, J.W.F, 2016. Chapter 11 - Managing the Mississippi River in a non-stationary world: Past practices and future challenges. *in* Fishery Resources, Environment, and Conservation in the Mississippi and Yangtze (Changjiang) River Basins, Chapter: 11, Publisher: American Fisheries Society, Editors: Yushun Chen, Duane Chapman, John Jackson, Daqing Chen, Zhongjie Li, Jack Kilgore, Quinton Phelps, and Michael Eggleton, pp.350
4. Remo, J.W.F, 2006. Chapter 15: Streams, Rivers and Flooding *in* Environmental Geology. Esling, S. ed., Mc Graw Hill, Chicago.

E. Popular and Creative Writing:

1. Remo, J.W.F., 2016, Comment on River users, River's Behaving Badly. Oldman River Dialogs. August 12, 2016. <http://www.oldmanriverdialogs.com/a-river-behaving-badly/>
2. Remo, J.W.F., 2016, Comment on River users, stakeholders, and responsibility. Oldman River Dialogs. August 3, 2016. <http://www.oldmanriverdialogs.com/river-usersstakeholders-and-responsibility/>
3. Christenson, B., Remo J.W.F., and Pinter, N., 2013, Surviving the Hazard: Applying Mitigation Practices in Southern Illinois. Daily Egyptian 11/20/2013.
4. Remo, J.W.F., 2011, Bigger, stronger, levees are not the answer. Riparian Rap Blog. May 15, 2011. <http://lrrd.blogspot.com/2011/05/bigger-stronger-levees-are-notanswer.html>

F. Book Reviews: (None)

G. Other: Press

The Inequality of America's Levee Systems. Mother Jones. August 8th, 2018. <https://www.motherjones.com/environment/2018/08/the-inequality-of-americas-levee-systems/>

Flood thy neighbor: Who stays dry and who decides? ProPublica, August 6th, 2018. <https://www.revealnews.org/article/flood-thy-neighbor-who-stays-dry-and-who-decides/>

To See How Levees Increase Flooding, We Built Our Own. ProPublica, August 6th 2018. <https://projects.propublica.org/graphics/levees>

What did we learn from the Great Flood of '93? Not much, say many. St Louis Post Dispatch. July 29th, 2018. https://www.stltoday.com/news/local/metro/what-did-we-learn-from-the-great-flood-of-not/article_2a02652b-3db8-58b3-ac23-8ba4bfc165d3.html

"The 'volatile' Mississippi: Challenges ahead as region sees continued development, more floods", June 25, 2018, <http://news.stlpublicradio.org/post/volatile-mississippi-challenges-ahead-region-sees-continued-development-more-floods#stream/0>

“Flood control efforts cause bigger floods Says Nature Article co-authored by SIU researcher”. April 14th 2018, http://thesouthern.com/news/local/environment/flood-control-efforts-cause-bigger-floods-says-nature-article-co/article_9c9e8b46-c7c3-585a-be0d-84bb6b39c218.html

“Treaty in Levee Wars Called Crucial for Saving Lives” Public New Service, April 12th, 2018. <http://www.publicnewsservice.org/2018-04-12/environment/treaty-in-levee-wars-called-crucial-for-saving-lives/a62153-1>

“Model shows town on wrong side of an Illinois levee district” Alton Telegraph, April 1, 2018 <https://www.thetelegraph.com/news/article/Model-shows-towns-on-wrong-side-of-an-Illinois-12798046.php>

“New Model Shows Towns on the Wrong Side of an Illinois Levee are treading water” ProPublica, March 30th 2018. <https://www.propublica.org/article/new-model-shows-towns-on-the-wrong-side-of-an-illinois-levee-district-are-treading-water>

“How overbuilt levees are raising flood risks in northeast Missouri” St. Louis Public Radio March 30, 2018. <http://news.stlpublicradio.org/post/how-overbuilt-levees-are-raising-flood-risks-northeast-missouri#stream/0>

“A new normal? Springtime flooding becoming more common for Midwest as planet warms” Southern Illinoisan, May 11th, 2017. http://thesouthern.com/news/local/a-new-normal-springtime-flooding-becoming-more-common-for-midwest/article_4010f8a3-1fa4-59fb-ab8d-4f4b14bdeda3.html

“Behind the levees: Flood risk can be higher with levees than without them” ScienceDaily.com, February 9th, 2016. <https://www.sciencedaily.com/releases/2016/02/160209162403.htm>

“The man-made flood: Levees and floodplain development are increasing flood damage in Missouri” June 20th 2016. <http://scienceline.org/2016/06/the-man-made-flood/>

“Debate continues in controversial levee project” Daily Egyptian, April 14, 2015 <https://dailyegyptian.com/5479/news/debate-continues-in-controversial-levee-project/>

“Averting Disaster” Southern Illinoisan, May 14, 2014

“Final meeting complete for Multi-Hazard Mitigation Plan” The Daily Registrar, June 13, 2012

“Local communities ready in case of disaster” Southern Illinoisan, February 7th, 2011

VI. TEACHING EXPERIENCE

A. Teaching Interests and Specialties:

Physical Geography (Geography 303)

Advanced GIS (Geography 420/520)

Field Methods in Geography (Geography 433/433H/533)

Water Resource Hydrology (Geography 434/534)
Natural Hazards (Geography 436/536)
Integrated Water Resources Management (Geography 440/540)
Fluvial Geomorphology (Geology 578)
Geomorphology (Geology 474)
Environmental Decision Making (Environmental Resources and Policy 502)
Watershed Science (Team Taught; Zoology 523)

B. Teaching and Training Grants:

\$28,000 - Curriculum development for Federal Emergency Management Agency's HAZUS-MH 2.0 Earthquake Loss assessment tool. Federal Emergency Management Agency. (June 2011 to September 2011) PI

C. Teaching Awards and Honors: (None)

D. Current Graduate Faculty Status:

Direct Dissertation Environmental Resources and Policy
Regular Department of Geography and Environmental Resources

E. Number of Master's and Ph.D. Committees on which you have served:

Committees in the Department of Geography and Environmental Resources (12)

Michael Burck, M.S., December 2018
Brandon Polk, M.S., May 2017
Khara Lukancic, M.S., August, 2016
Daniel Fucik, M.S., May, 2016
Brooke Haldeman, M.S., December, 2015
Ashley Suiter, M.S., May, 2015
Chen Wang, M.S., May, 2014
Zach Heern, M.S., December, 2013
Johannes Mack, M.S. August, 2013
Alex VanPelt, M.S., May, 2013
Timothy Freeman, M.S., May, 2013
Adam Shaffner, M.S., December, 2012

Committees in Environmental Resource and Policy Ph.D. Program (3)

Amanda C. Marshall, Ph.D., May, 2017
Shanna McClain, Ph.D., December, 2016
Awoke Dannew Teshager, Ph.D., May, 2016

Committees in the Department of Anthropology and Archeology (1)

Anthony Farace, M.S., December 2019

Committees in the Department of Architecture and Interior Design (1)

Isaac Thomas Grayson, M.S. Architecture, December 2014.

Committees in the Department of Civil and Environmental Engineering (4)

Ranjeet Thakali, M.S., May 2017

Ganesh Raj Ghimire, M.S., May 2016

Nicholas A. Haas, M.S., December 2014

Sanjeet Shrestha, M.S., December 2013

Committees in the Department of Geology (4)

Stephanie K. Jarvis, M.S., December 2014

Jennifer Dierauer, M.S., May 2011

Megan Carlson, M.S., December 2010

Elizabeth Evanoff, M.S., December 2010

Committees in the Department of Zoology (1)

Karen Baumann, M.S., May 2016

F. Names of Students who have completed Master's Theses (7) and Doctoral Dissertations (3) under your Direction:

Anne Hayden-Lesmeister, Ph.D. Environmental Resources and Policy Program, August 2018.
Dissertation Title: Using 1D2D Modeling to inform restoration efforts in the Atchafalaya River Basin, Louisiana.

Ali Alruzuq, M.S. Department of Geography and Environmental Resources, May 2018. Thesis Title: Socio-hydrology of levees along the lower Illinois River.

Julia Ryherd, M.S. Department of Geography and Environmental Resources, July 2017. Thesis Title: Quantifying the rates and spatial distribution of recent hydrologically connected floodplain sedimentation along the Middle Mississippi River, USA using digital elevation models and dendrogeomorphology

Ross J. Guida, Ph.D. Environmental Resources and Policy Program, May 2016. Dissertation Title: Hydraulic, Geospatial, and Socioeconomic modeling of strategic Floodplain Reconnection Tradeoffs Along the Lower Tisza River (Hungary) and Lower Illinois River (Illinois, USA)

Ann Rushing, M.S. Department of Geography and Environmental Resources, December 2015. Thesis Title: The Potential for Reconnection on the Lower Illinois River

Justin P. Kozak, Ph.D., Environmental Resources and Policy, August 2015. Dissertation Title: Restoration and Water Management in the Atchafalaya River Basin Louisiana. Co-chair with Professor Christopher L. Lant.

Samir Shrestha, M.S. Department of Geography and Environmental Resources, December 2014. Thesis Title: Sensitivity of Hazus-MH Flood Loss Estimates to Selection of Building Parameters: Two Illinois Case Studies.

Mohamed Mahgoub, M.S. Department of Geography and Environmental Resource, December 2014. Thesis Title: New Multiple-Scale Technique for the Assessment of Relative Flood Vulnerability.

Miles Lampo, M.S. Department of Geography and Environmental Resources, August 2014. Thesis Title: A Validation Study of the North Carolina Rapid Field-Based Rating System for Discrimination Flow Permanence Classes of Headwater Streams in Agriculture Basins in Southern Illinois.

Anish Kendal (Co-advisor with Greg Wilkerson), M.S. Department of Civil and Environmental Engineering, May, 2012. Thesis Title: A Two-dimensional numerical simulation study of flow around chevron dikes.

G. Other: (None)

VII. UNIVERSITY EXPERIENCE

1. Department Committees:

Chair of the Undergraduate Curriculum and Assessment Committee, Department of geography and Environmental Resources, July 2015 to July 2017

Director of Undergraduate Studies for the Department of Geography and Environmental Resources, July 2015 to July 2017

Department of Geography and Environmental Resources Environmental Geographer Search Committee, October 2014 through March 2015

Department of Geography and Environmental Resources Environmental Geographer Search Committee, January through March 2014

Department of Geography and Environmental Resources Merit Pay Committee, January 2013

2. College and University Committees and Councils:

College of Liberal Arts Council August, 2013 – May 2015

College of Science Dean Search Committee August 2006 - August 2007 (As PhD Student)

3. Other: (None)

VIII. PROFESSIONAL SERVICE

A. Membership in Professional Associations:

American Association for the Advancement of Science (AAAS)

American Geophysical Union (AGU)

Association of American Geographers (AAG)

Geological Society of America (GSA)

International Association for Mathematical Geology (IAMG)

B. Offices Held and honors Awarded in Professional Associations: (None)

C. Consultantships:

Assessment of flood surcharge related to differences in existing and authorized levee elevations along the Mississippi River between Keokuk, IA and Thebes, IL using the U.S. Army Corps of Engineers Upper Mississippi River Flood Risk Management Model, American Rivers. February to March 2018

Assessment of Cypress Creek's Restoration Potential, Illinois Department of Natural Resources. March 2015 to Present

Peer Review of U.S. Environmental Protection Agency's "Flood Loss Avoidance Benefits of Green Infrastructure for Stormwater Management Study" July to August 2014.

Natural Community and Inundation Mapping for Buttonland Swamp and Vicinity, Lower Cache River Valley, Illinois. Illinois Department of Natural Resources. March to June 2014.

Reef Hydrodynamic Workshop for the St. Clair and Detroit Rivers. National Oceanic and Atmospheric Administration See Grant Project through University of Michigan. February 2014

Climate-induced changes in flood risk and land use approaches to mitigate the flood risk in St. Louis County, MO National Oceanic and Atmospheric Administration through Resource for the Future. May 2013 to May 2014

Levee Collection from LiDAR/DEM in Indiana. U.S. Army Corps of Engineers through the Indiana University Purdue University at Indianapolis's Polis Center November 2012 to November 2013

1-D/2-D Hydrodynamic levee breach simulation for the Metro-East Levee and potential impacts to U.S. Steel's Granite City Foundry. U.S. Steel Corporation. January 2011 to June 2011.

D. Evaluation of Manuscripts for Journals and Book Publishers and of Grant Proposals for Agencies:

Reviewer for the Journal of Hydrology, Natural Hazards, Ecological Engineering, Geoforum, Natural Hazards and Earth System Sciences, Springer Plus, Risk Analysis, Catena, Water, Natural Hazards, PLOS, International Journal of Agricultural and Biological Engineering, Physical Geography, America Journal of Water Resources, and Southeastern Naturalist

Reviewer for National Science Foundation's Geography and Spatial Sciences (GSS) Program

Reviewer for the Maryland Sea Grant 2016-2018

Reviewer for the New York Sea Grant 2017-2019

E. Other: (None)

IX. COMMUNITY SERVICE

Federal Emergency Management Agency's HAZUS Loss Estimation Software User Group
Coordinator for the State of Illinois

Central United States HAZUS Best Practices Committee

Illinois Geologic Mapping Advisory Committee