

**UMRR**  
**Long Term Resource Monitoring FY21 Activities**  
**(October 2020–September 2021)**

**Meetings, Publications, Presentations, and Conference Attendance**

- Sobotka, Molly. Fulgoni, J. Knott, K. 26AUG.2020 Update on Missouri Department of Conservation contaminant sampling in the Mississippi River. UMRCC WQ Tech Section
- Alicia Carhart.17Mar2021. Attended the annual meeting of the Upper Mississippi River Conservation Committee. Virtual
- Whitten, A. L., O. M. Mendenhall, L. E. Solomon, and A. F. Casper. 2021. Operational Impacts of a Water Management Structure on the Surrounding Fish Assemblages in a Restored Backwater and a Large Floodplain River. *The American Midland Naturalist*, 185(1), 120-138.  
<https://doi.org/10.1637/0003-0031-185.1.120>
- Larson DM, Cordts S, Hansel-Welch NJ. (2020) Management of shallow lakes improves
- Maxson, K.A. 2021. Large River Fisheries Ecologist. Virtual Invited Presentation to the Missouri State University subunit of the American Fisheries Society, March 22, 2021.
- Sobotka, Molly. 27APR2021 Len Small: What's going on in there? River Resource Action Team
- Alicia Carhart. 7Sept2021. Attended virtual UMRR Hydrology meeting.
- Maxson, K., L. Solomon, J. Hampton, and T. Barry. 3/10/2021. Virtual Outreach: new ideas for the age of COVID and beyond. Invited outreach workshop/presentation at AFS 2021
- Harris, B.S., L. Solomon, K.A. Maxson and J. Lamer. Lock Closure on the Illinois River: an overview on the project's background, where we are now, and where we go in the future. Live virtual presentation at the Long-term resource Monitoring Science Meeting, March 30-31, 2021.
- Carhart, A.M., Kalas, J.E., Rogala, J.T., Rohweder, J.J., Drake, D.C., and J.N. Houser. 2021. Understanding constraints on submersed vegetation distribution in a large, floodplain river: the role of water level fluctuations, water clarity, and river geomorphology. *Wetlands* 41(5):57.
- Blackert. A. E., L. E. Solomon, and J. T. Lamer. 3/11/2022. Drivers of Fish Growth and Recruitment in Largemouth Bass, Bluegill, and Black Crappie in the Emiquon Preserve. Virtual IL AFS 2021
- Houser, J., K. Bouska, N. De Jager, B. Ickes, K. Jankowski, D. Larson, M. Van Appledorn, J. Rohweder, J. Rogala, A. Bartels, A. Carhart, D. Drake, S. Giblin, J. Kalas, K. Bayles, M. Bowler, R. Burdis, E. Lund, K. Maxson, L. Solomon. 2021. Twenty-six years of data across 1300 river kilometers reveal diverse ecological changes and interactions in a large-floodplain river system. Society for Freshwater Science annual meeting (virtual).
- Alicia Carhart. 10June2021. Presented the results of SAV constraints MS at the WI DNR Environmental Management statewide meeting. Virtual.
- Houser, J., K. Bouska, N. De Jager, B. Ickes, K. Jankowski, D. Larson, M. Van Appledorn, J. Rogala, L. Solomon, K. Maxson, A Bartels, M. Bowler. 3/18/2022. THE UPPER MISSISSIPPI RIVER SYSTEM FROM 1993 TO 2019: INTRODUCTION TO AN ASSESSMENT OF THE STATUS AND LONG-TERM ECOLOGICAL TRENDS OF THE RIVER AND ITS FLOODPLAIN. UMRCC Virtual 2021
- Lederman, N, J., A. L. Whitten, J. A. DeBoer, K. A. Maxson, L. E. Solomon. 2021. Nonnative fish species in the Illinois River Waterway. Introduced Species Section Newsletter, AFS North Central Divisional Update
- Harris, B. S., N. Lederman, R. Anderson, L. Solomon, and J. Lamer. 3/30/2021. On-going efforts to expand LTRM compliant sampling in the middle reaches of the UMR and the entire Illinois River:

- Lessons learned. Live virtual presentation at the Long-term resource Monitoring Science Meeting, March 30-31, 2021.
- Ickes, B., K. Maxson, A. Bartels, L. Solomon, and M. Bowler. 3/30/2021. Status and Trends III – review of findings presented in this seminal LTRM program report, including status of report. Live virtual presentation at the Long-term resource Monitoring Science Meeting, March 30-31, 2021.
- Lamer, J. T. and L. E. Solomon. 3/30/2021. Standardized, multi-gear approach in the Illinois River for the detection of bigheaded carp and the evaluation of bigheaded carp and other fish community response to contracted and enhanced contracted commercial fishing. Amount Requested: \$447,385
- Harris, B.S., L. Solomon, K. Maxson, and J. Lamer. 3/31/2021. Project update for the fish community response to lock closure on the Illinois Waterway. Live virtual presentation at the Long-term resource Monitoring Science Meeting, March 30-31, 2021.
- Solomon, L., A. Blackert, O. Mendenhall, and J. Lamer. 4/7/2021. Invasive carps in the Emiquon Preserve: a summary of the story so far. 2021 Virtual Emiquon Symposium
- Schaick, S. J., J. A. Williams, K. A. Maxson, L. E. Solomon, and J. T. Lamer. 4/7/2021. Catch comparison of fishes and turtles in hoop nets using three bait types. 2021 Virtual Emiquon Symposium.:
- Phillips, S., J. DeBoer, L. Solomon and J. Lamer. 4/7/2021. Flathead catfish artificial nest structure utilization within the Illinois Rock River system. 2021 Virtual Emiquon Symposium.
- Blackert, A., L. Solomon, E. Meyer, J. Thulander, T. Ting, J. DeBoer, T.D. VanMiddlesworth, R. Pendleton, M. Fritts, A. Fritts, and J. Lamer. 4/7/2021. Drivers of fish growth and recruitment of Largemouth Bass, Bluegill, and Black Crappie at the Emiquon Preserve. Virtual Emiquon Symposium.
- B. S. Ickes, K. Maxson, L. Solomon, A. Bartels, and M. Bowler. 4/22/2021. THE STATUS AND TRENDS OF FISHERIES IN THE UPPER MISSISSIPPI RIVER SYSTEM. 2021 Virtual Mississippi River Research Consortium.
- Erickson, R., J.L. Kallis, A. Coulter, D.P. Coulter, R. MacNamara, J.T. Lamer, W. Bouska, K.S. Irons, L.E. Solomon, A.J. Stump, M. Brey, C.J. Sullivan, G. Sass, J.E. Garvey. 2021. Demographic rate variability of bighead and silver carps along an invasion gradient. Journal of Fish and Wildlife Management. Early view: <http://dx.doi.org/10.3996/JFWM-20-070/2834760/jfwm-20-070.pdf>.
- Dave Bierman. October 2020. Attended the Quarterly A-Team meeting via conference call.
- Dave Bierman and Kyle Bales. Participated in multiple Lower Pool 13 HREP Project Delivery Team (PDT) conference calls. October-December 2020.
- Dave Bierman. Participated in multiple Lower Pool 13 HREP Project Delivery Team (PDT) conference calls. January-March 2021
- Dave Bierman. Participated in quarterly A-Team conference call. January 2021.
- Dave Bierman. Participated in the UMRBA Water Quality Taskforce virtual technical section meeting. January 2021.
- Travis Kueter. Served on the Iowa DNR Fisheries Statewide planning committee. January-March 2021.
- Dave Bierman and Travis Kueter. Virtually attended the Iowa Chapter of the American Fisheries Society meeting. February 2021.
- Dave Bierman and Travis Kueter. Virtually attended the Iowa DNR Fisheries Statewide meeting. Kueter also served as session moderator. March 2021.
- Dave Bierman. Participated in teh combined winter meeting of the FWIC & OSIT via teleconference. March 2021.
- Dave Bierman and Travis Kueter. Virtually attended the annual Upper Mississippi River Conservation Committee (UMRCC), including participation in the Fisheries and Water Quality Technical Sections. March 2021.
- Dave Bierman and Travis Kueter. Virtually attended the UMRR-LTRM "All Hands" meeting. March 2021.

Dave Bierman and Travis Kueter. Participated in the virtual UMRR-LTRM Fisheries Component meeting. March 2021.

Dave Bierman. Participated in multiple Lower Pool 13 HREP Project Delivery Team (PDT) meetings. April-June 2021.

Dave Bierman. Participated in the quarterly A-Team conference call. May 2021.

Dave Bierman. Participated in the 2022 UMRR Report to Congress kickoff meeting hosted by UMRBA and USACE. July 2021.

Dave Bierman. Participated in multiple Lower Pool 13 HREP Project Delivery Team (PDT) conference calls. July-September 2021.

Dave Bierman. Participated in the Fish and Wildlife Interagency Committee (FWIC) and River Resources Coordination Team (RRCT) virtual meetings. September 2021.

## Technical activities and assistance

Molly Sobotka. 2021. Lead field crew for UMRBA Reaches 8&9 Clean Water Act Pilot efforts. Assisted in creating and testing field protocols including adapting LTRM fish collection methods. Collected fixed site water quality data in UMR pools 21 and 20.

Alicia Carhart, Paxton Smith. 17May2021. Vegetation pre-sampling (capture early season plant dynamics).

Levi Solomon. 1/20/2021. Consultation with Josh Bruegge about sectioning channel catfish pec spine processes and sent him some literature and some photos.

Mentored Post-doctoral researcher, Megan Fitzpatrick, MNDNR in wetland studies (February 2019– March 2021). Megan secured a permanent position and was promoted to a Research Scientist position.

Maxson, K. Workshop taken - Layering and Animations in ggplot. 81st Midwest Fish and Wildlife Conference (virtual). 2021.

Molly Sobotka, 2020-2021 GREON buoy deployment, maintenance, retrieval. Assist in data QA.

Alicia Carhart, Paxton Smith. 10August2021. Participated in outpool vegetation sampling with the Upper Mississippi River Conservation Committee

Levi Solomon and Kris Maxson. 1/21//2021. Meeting with Sarah King, INHS, about shortnose gar telemetry, data analysis, and upcoming plans for publication.

Maxson - Introduction to Stock Synthesis: A Stock Assessment Modeling Approach. American Fisheries Society 151st Annual Meeting, Baltimore, Maryland. 2021

Alicia Carhart, Danelle Larson, Jason Rohweder. 2021. Data integration for ecosystem states proposal. Begin data analyses.

Levi Solomon served as President of the Mississippi River Research Consortium for 2021.

Maxson, K. Workshop taken - Spatiotemporal Analysis of Ecological Data. American Fisheries Society 151st Annual Meeting, Baltimore, Maryland. 2021.

Danelle Larson (lead), Alicia Carhart, Eric Lund. 2021. Aquatic vegetation types identified during early and late phases of vegetation recovery in the upper Mississippi River - analyzing data, review and discussions.

Levi Solomon. 5/14/2021. Helped IDNR staff dip sampling nets black tar and green dip.

Alicia Carhart, Danelle Larson, Eric Lund. 2021. Wild rice discussions and next steps for analyses and genetic proposal.

Levi Solomon. 5/24/2021. Co-led a field training for IL DNR, USACE, and INHS staff on proper techniques for LTRM style electrofishing. Training conducted on the Starved Rock pool.

Alicia Carhart, Deanne Drake, James Fischer, Jeffrey Houser, Kathi Jankowski, John Kalas, and Eric Lund. 2021. Intrinsic and extrinsic regulation of water clarity in a large, floodplain-river ecosystem- Discussions, Data analyses, and writing.

Levi Solomon. 6/24/2021. Provided Cory Suski, University of Illinois, LTRM related content for his fall Fisheries Techniques class.

Levi Solomon. 10/7/2021. Consultation with Joshua Stafford, Mississippi State University, about telemetry/triangulation of silver carp in a riverine habitat.

Levi Solomon and Kris Maxson. 10/18/2021. Meeting with Sarah King, INHS, about shortnose gar telemetry, data analysis, and upcoming plans for publication.

Kyle Bales Dave Bierman Mel Bowler and Travis Kueter. Assisted Iowa DNR Bellevue Fisheries Research Team with sauger and walleye evaluations in Pools 11 and 13. October 2020.

Mel Bowler. Provided channel catfish population dynamics data from LTRM sampling in Pool 13 from 1993-2020 to Iowa DNR Fairport Management station for use in Iowa's Catfish Management Plan. December 2020.

Dave Bierman. Participated on the interview team to refill the vacant Fisheries and Aquatic Vegetation Component Specialist positions at the Bellevue Field Station. April 2021.

Seth Fopma and Ashley Johnson. Helped coordinate UMRCC Aquatic Vegetation Outpool sampling in Pools 9 and 10. Fopma, Johnson, and seasonal staff assisted with the sampling in Pools 9 and 10. August 2021.

Seth Fopma, Ashley Johnson and seasonal staff. Assisted Iowa DNR's Fairport Management Team with Huron Island HREP monitoring in Pool 18. September 2021.

Seth Fopma, Ashley Johnson and seasonal staff. Assisted Iowa DNR's Bellevue Fisheries Research Team with fisheries sampling at the Beaver Island HREP in Pool 14. September 2021.

## Outreach

Levi Solomon. 6/10/2021. Co-hosted event hosting INHS human resources staff for a tour of the field station and Illinois River.

Maxson, K. Being a Fish Biologist. STEM Careers teaching unit. Booth Elementary School, Enfield, IL (virtual). 2021.

Levi Solomon. 8/5/2021. Hosted TOT TIME at Dickson Mounds Museum. This is an outreach event for local children ages 1-12.

Maxson, K. Science Day, New Berlin Elementary School, New Berlin, 2021(virtual). Presentation on work as a fish biologist for the LTRM program.

Levi Solomon. 10/2/2021. Hosted Cory Suski's Fisheries Techniques Class from the University of Illinois.

Mel Bowler. Provided LTRM channel catfish catch and length frequency graphs from Pool 13 from 1993-2020 to an interviewer with Iowa Public Television. October 2020.

Dave Bierman. Provided LTRM gizzard shad catch data from Pool 13 to a reporter from the Quad City Times for an article about mid-winter bald eagle counts and food resources. February 2021.