

Louisiana Water Conference 2023

Schedule and Presentations

August 2-3, 2023

Dalton Woods Auditorium

Energy, Coast & Environmental Building

Louisiana State University, Baton Rouge, Louisiana 70803

Wednesday, August 2, 2023	
8:00 am	Registration Starts
8:30-9:00 am	Opening Remarks
9:00-10:15 am	Concurrent Sessions
10:15-10:45 am	Break
10:45-12:00 pm	Concurrent Sessions
12:00-1:30 pm	Box Lunch and Poster Session
1:30-2:45 pm	Concurrent Sessions
2:45-3:15 pm	Break
3:15-4:30 pm	Concurrent Sessions
4:30-6:30 pm	Networking/Social Hour
Thursday, August 3, 2023	
8:00 am	Registration Starts
8:00-9:00 am	Ethics Lecture for PG and PE
9:00-10:15 am	Concurrent Sessions
10:15-10:45 am	Break
10:45-12:00 pm	Concurrent Sessions
12:00-1:30 pm	Box Lunch and Poster Session
1:30-2:45 pm	Concurrent Sessions
2:45-3:15 pm	Break
3:15-4:30 pm	Concurrent Sessions
4:30 to 4:45 pm	Closing Remarks

#	Authors	Title	Presentation
1	William Schramm and George Losonsky	Ethics for Geoscientists and Engineers	Oral
2	Rachael Mathews	Louisiana's Water Quality Integrated Report	Oral
3	Michael Attia and Frank Tsai	Airborne electromagnetic resistivity data and boreholes data for better understanding the Subsurface: Mississippi River alluvial aquifer	Poster
4	Yuqi Song, Rafin Hasan and Frank Tsai	Efficient 3D Interval Kriging Interpolation on Lithofacies Model of Mississippi River Valley Alluvial Aquifer	Oral
5	Shuo Yang and Frank Tsai	Assessing groundwater stress and storage variations in Louisiana and Southwest Mississippi	Oral
6	Mohammed Elkharakany, Shuo Yang, Rafin Hasan	Geological Modeling for Mississippi Embayment Aquifer System	Poster
7	Aya Mohamed, Shuo Yang and Frank Tsai	An unstructured gridding approach to improve developing high-resolution groundwater modeling for a complex aquifer system	Oral
8	Richard Day	Establishing environmental flows in Big Cypress Bayou, a dammed stream in the watershed of Caddo Lake in northeast Texas: Riparian forest perspective	Poster
9	Stokka Brown	Floodplain Mapping Products from Detailed 2D Model Output	Oral
10	Stokka Brown	The City of Central's Offsite Drainage Assessment Program: A Comprehensive Drainage Impact Analysis of Proposed Land Development Utilizing High-Resolution, 2D Hydraulic Models	Oral
11	Rebecca Malpass	Evidence of "Forever Chemicals" Found in the Industrial Corridor: Louisiana Water Systems at Risk	Oral
12	Chris McLindon	Faults as Conduits, Baffles and Barriers to Fluid Flow in south Louisiana	Oral
13	Neha Priyadarshini, Falguni Baliarsingh and Chitaranjan Dalai	Prediction of groundwater quality using Artificial neural networks and GIS: A case study of Ganjam district Odisha	Oral
14	Marisa Brennan, Brett T Wolfe and Alistair Rogers	Applying optimization theory to predict water dynamics in flooded trees.	Oral
15	Kylie Wright, Carla Suszkowski and Tommy Clark	Southwestern Energy's Fresh Water Neutral Program	Oral
16	John King	The Recent Sackett Decision and the Scope of Jurisdiction Over Wetlands	Oral
17	Emma House and Ehab Meselhe	Numerical Modeling of Riverine Streamflow Under Hysteretic Conditions	Poster

18	Laura Manuel, Ehab Meselhe and Kelin Hu	Lower Mississippi River Freshwater Allocation through Natural and Manmade Diversions	Oral
19	William Schramm	Technologies for Obtaining Fresh/Drinking Water from Alternative Sources	Oral
20	Mohamed Awaad and Emad Habib	Evaluation of Flood Forecasting Uncertainties in Coastal Low-Gradient River Basins: A case study in the Vermilion River in South Louisiana	Oral
21	Yixuan Wang, Z.George Xue, Xiaochen Zhao and	A Numerical Investigation of Compound Flooding during Hurricane Ida	Oral
22	Alyssa Dausman, Diana Di Leonardo, Soupy Dalyander,	Long-Term Strategic Water Sustainability Plan for Groundwater Resources in Baton Rouge area, Louisiana	Oral
23	Xiaochen Zhao, Z. George Xue, Yixuan Wang, Wei Yu and	A High-resolution Process-based Operational Water and Sediment Forecast System for the Mississippi River	Oral
24	Arnob Barua and Christopher E Kees	Development of the Multidimensional Infiltration Model for the Stormwater Infiltration System	Oral
25	Alexander Kolker, Dallon Weathers, Christy Swann, Trey	Neptune Pass: An Update On The Largest New Distributary Of The Mississippi River	Oral
26	Robert Jacobsen	The High-Definition Flood Inundation Map for the August 2016 Flood for the Amite River Basin	Oral
27	John Ellis	The Land Surface—Groundwater Nexus: A case study on Houston's Brownwood subdivision, the science, and why it matters	Oral
28	John Ellis	The GULF 2023 Model and Ensemble: Modeling Advances and Results for the Gulf Coast Aquifer System	Oral
29	Ebenezer Etsiwah, Andrea J Martinez and Samuel D. Snow	A novel disinfection technology for onsite wastewater treatment using UV-LEDs	Poster
30	Yinuo Zhou, Grace Rosseau and Brett Wolfe	Bark water vapor conductance varies among temperate forest tree species and is affected by flooding and stem bending	Oral
31	Philip Taucer, Jordan Skipwith and Jason Afinowicz	CAGWCC: Solutions for Water Resource Management	Oral
32	Katherine Knierim, Madalyn Blondes, Bonnie McDevitt,	An updated assessment of lithium resources in brines in southern Arkansas	Oral
33	Meggan Franks, Stacia Conger, Robert Rohli, Carol Friedland	A Community-Engagement Approach to Managing Agricultural Drought	Poster
34	Jeffrey Hanor	The origin and nature of saline formation waters which underlie Baton Rouge regional aquifers	Oral
35	Mark Davis	Uneasy Neighbors: Water Management, Science and Law The Challenge of Updating Louisiana Water Law and Management	Oral

36	Weiliang Sun, Samuel Snow and Xiuping Zhu	A Novel and Effective Dewatering Method for Hydrogels by Ammonia Gas	Poster
37	Alex Sheffield, David Hawley and Michael Picou	Managing Growth Impacts in Overloaded Watersheds	Oral
38	Doug Daigle	Louisiana and Gulf of Mexico Hypoxia: Bringing Clarity to State Policy	Oral
39	Xuelian Meng, Nan Shang, Basant Awasthi, Bijaylaxmi	A drone monitoring solution for saltwater marsh habitats of Roseau cane in coastal Louisiana	Oral
40	Juan Lorenzo	Permeability Structure in a Mississippi River Holocene Point Bar: Duncan Point, Louisiana.	Oral
41	Wenqiang Zhang, Kehui Xu, Omar Alawneh and Navid	Hurricane impact on water and sediment transport near Mississippi Delta and inner Louisiana shelf	Oral
42	Shimul Ghosh and Aaron Bivins	Exploring the Potential of Nanotrap® Microbiome Particles and digital PCR for High-Throughput Microbial Source Tracking in Surface Waters	Poster
43	Haitham Saad and Emad Habib	Assessing the Impact of Large Natural Storage Areas on Flood Dynamics in Low-Gradient Coastal Rivers: A case study in the Vermilion River in South Louisiana	Oral
44	Tanveer Ahmed and Dr. Emad Habib	Application of the Stochastic Storm Transposition Method for Estimating the Natural Variability of Extreme Rainfall Events and Probabilistic Representation of Flood Risks	Poster
45	Erika Ornouski, Kristine DeLong and Amy Wagner	A Stable Isotopic Profile of Atmospheric River Storms Impacting Northern California	Poster
46	Israt Jahan Tama, Rebeca De Jesus Crespo, Thomas	Linking Flood Resilience to Urban Reinvestment in the Amite River Basin, LA.	Poster
47	Rongqing Du, Kehui Xu, Daoyang Bao, Z. George Xue, Courtney	Atmospheric and Hydrodynamic Responses in Galveston Bay and Coastal Ocean to Hurricane Harvey	Oral
48	Sarah Crabtree, Erika Ornouski and Kristine DeLong	High-precision and accuracy measurements of oxygen and hydrogen isotope ratios ($\delta^{18}O$ and δ^2H) in the LSU PAST Laboratory.	Poster
49	Sade Dennis, Carol Wilson and Kehui Xu	The Impact of Hurricane Ida on Louisiana Continental Shelf and Dredge Pit Sedimentation	Poster
50	Lee Gary and Erik Schuktz	Revolutionizing Exterior Cleaning and Agricultural Industries through Drone Hydro-Technology	Oral
51	Jun Xu and Anamika Dristi	Assessing contribution of cultural carbon to the Mississippi River	Oral
52	Anamika Dristi and Yi Jun Xu	Carbon Dioxide Emission from the Atchafalaya River	Oral
53	Zhenwei Wu, Songjie He and Yi-jun Xu	Assessment of metal levels along an estuary draining a petrochemical industry-concentrated area in southwestern Louisiana	Oral

54	Naresh Suwal and Zhiqiang Deng	Determination of Coastal Water Surface Height Using Remote Sensing Data: a Case Study of Louisiana Gulf Coast	Poster
55	Caitlin Turner and Matthew Hiatt	Characterizing Water Residence Time and Hydrodynamics in Lake Pontchartrain: Implications for Water Quality	Oral
56	Timothy Duex, Jacob Chicola and Stephen Sinitiere	Lithologic and Structural Analysis and Location of Shallow Sands of the Chicot Aquifer Confining Unit in a four Parish area of the Acadiana Region, Louisiana	Oral
57	Shekhar Mahat and Zhiqiang Deng	Modeling and Forecasting Harmful Algal Blooms in Lake Pontchartrain using Environmental Input Parameters	Poster
58	Robert Feder and John White	Impact of river diversions on salinity and nutrient availability in brackish marsh soils	Oral
59	Scott Hemmerling and Allison Haertling	"You Turn the Tap On, the Water's There, and You Just Think Everything's Fine": A Mixed-Methods Approach to Understanding Public Perceptions of Groundwater Management in Baton Rouge, Louisiana	Oral
60	Jessica Villers and David Ladd	Mississippi Alluvial Plain Soil Water-Balance Model	Poster
61	Changyoon Jeong, Hwangju Jeon and Xi Zhang	Recycling tailwater using agricultural return-flows to improve irrigation water quantity and quality in Louisiana	Oral
62	Mercedes Pinzon Delgado and John White	A Prediction of Changes in Phosphorus Dynamics in a Salt Marsh Soil as a Result of a Mississippi River Sediment Diversion Operation	Oral
63	Jacob Cheng, John White and Robert Feder	Effects of Salt Marsh Freshening on Porewater Salinity and Ammonium Flux	Poster
64	Ahmed Abdalla and Ahmed Abdullah	Land subsidence monitoring in East/West Baton Parishes using InSAR and GNSS measurements	Poster
65	Bryan Piazza and Michelle Cutrofello Eddy	The Nature-Based Solutions Explorer for Louisiana: A Tool and Approach to Increase Resilience in the Face of Changing Conditions	Oral
66	James Clark	UNDERGROUND INJECTION WELL HISTORY IN THE UNITED STATES OF AMERICA	Oral