



Director of Water Resources
jhixson@augustmack.com

Dr. Jase Hixson is the Director of Water Resources at August Mack. He has a wide range of experience, including academic research, modeling, and industrial operations, all of which have centered around water and the people, organisms, and environments that rely on it. His primary areas of expertise include environmental fate modeling, surface water and groundwater hydrology, and wastewater treatment operations.

Project Experience:

- Operated and consulted for industrial and municipal wastewater treatment plants ranging from 200 gpd to 85.0 MGD. Optimized biological treatment of wastewater through microscopic analysis and a mass-balance approach to determine the most effective method to achieve and maintain regulatory requirements while minimizing operational costs.
- Constructed and evaluated hundreds of surface water, groundwater, and coupled hydrologic models to assess the fate and transport of water and solutes.
- Investigated dozens of sites to determine the nature and extent of contamination, establish remediation strategies, and forecast remediation efficacy. Contaminants of concern included perfluoroalkyl and polyfluoroalkyl substances (PFAS), nutrients, harmful algal blooms (HABs), petroleum, volatile organic compounds (VOCs), acids, caustics, heavy metals, pesticides, herbicides, and wastewater-derived emerging contaminants.
- Developed environmental and paleoenvironmental reconstructions of freshwater systems to identify contamination sources and establish remediation criteria through microscopic analysis of living and fossil diatom assemblages. The results were used to construct and calibrate coupled biologic and hydrologic models capable of simulating the environmental conditions, extent of contamination, and forecast system recovery.

Expertise:

- Environmental fate modeling
- Water/wastewater treatment
- Surface water/groundwater hydrology
- Algae taxonomy

Professional Experience:

August Mack Environmental, Inc.
Director of Water Resources
2022-Current

Hydrogeologist/Geologist
2021-2022

120Water
Technical Advisor to the Director
2020-2021

Bynum Fanyo Utilities, Inc.
Licensed Wastewater Operator
2019-2021

Laboratory Manager
2018-2019

Education & Certifications:

- Ph.D. Environmental Science, Indiana University
- Ph.D. Minor in Geology, Indiana University
- M.S. Earth & Quaternary Systems, Indiana State University
- B.S. Earth & Environmental Sciences/ Geosciences/Physics, Indiana State University
- 40-Hour Hazardous Waste Site Operations (HAZWOPER) Training, OSHA and Current 8-hour refresher
- Class C - Certified Wastewater Operator
- Class III - Certified Wastewater Operator