



Department of Civil & Environmental Engineering
Missouri Water Center (MWC)
Seminar in Environmental Engineering

Time:

Friday, February 13, 2026

2:00 – 3:00 P.M.

Location:

E2511 Lafferre Hall



Katilin Belk

Katilin is the Outreach and Education Coordinator and LiDAR Manager at the Missouri Spatial Data Information Service (MSDIS), where she leads statewide efforts to expand access to available data and improve geospatial literacy across Missouri. Previously, Katilin served as GIS Coordinator at Allstate Consultants, where she led the firm's GIS program, built repeatable workflows, strengthened data management practices, and supported multidisciplinary civil engineering projects. Katilin also serves in leadership roles within Missouri's geospatial community, including her involvement with the Missouri GIS Advisory Council (MGISAC) and the National States Geographic Information Council (NSGIC), where she contributes to statewide and national geospatial collaboration and outreach. She holds a Master's degree in Geography from the University of Missouri and a Bachelor's degree in Geography with a GIS minor from Southern Illinois University Edwardsville. Katilin is passionate about mentorship, education, and sharing knowledge to empower others to use GIS, whether as a career path or as a complement to their existing work.

Exploring the USGS 3D National Terrain Model and Its Applications for Hydrology and Mapping

Katilin Belk

Outreach and Education Coordinator, LiDAR Manager
Missouri Spatial Data Information Service

High-quality elevation data is essential for understanding the physical landscape, managing natural resources, and supporting a wide range of decisions. In this session, Katilin Belk, Outreach and Education Coordinator and LiDAR Manager at the Missouri Spatial Data Information Service (MSDIS), will explore the role of LiDAR in creating detailed 3D terrain models and supporting hydrologic feature mapping. She will provide an overview of the U.S. Geological Survey's 3D Elevation Program (3DEP), the 3D National Terrain Model (3DNTM), and The National Map, highlighting how these resources make elevation data more accessible, consistent, and actionable. The session will also cover how geospatial tools can be used to preprocess LiDAR data before modeling, including filtering point clouds, generating digital elevation models (DEMs), and preparing surfaces for hydrologic and terrain analysis. These preprocessing steps improve accuracy, reduce errors, and streamline workflows for deriving streams, watersheds, and other hydrologic features. Katilin will share how her work at MSDIS fits into state and national geospatial efforts and highlight discussions that span multiple disciplines.