



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

Seminar in Environmental Engineering

**Time: Friday, November 21, 2025
2:00 – 3:00 P.M.**

Location: E2511 Lafferre Hall

Information about a Little-Known Career Path as Wildlife Biologists/Road Ecologists in the MoDOT Environmental Section

Taylor MacDonald, Senior Environmental Specialist
Caleb Knerr, Senior Environmental Specialist

Missouri Department of Transportation - Design Division, Environmental Section

<https://umsystem.zoom.us/j/91084660904?pwd=60ae8GfryXpOU4oMzzJYGayt8ExrBy.1>

Meeting ID: 910 8466 0904
Passcode: 447046

Abstract: While working for a Department of Transportation (DOT) is not often thought of when determining a career path in wildlife biology, conservation, or ecology, it can be a great option to gain a wide range of experience. In MoDOT's Environmental Section, there are 7 biologists that evaluate transportation project's impacts to the environment. This includes evaluating project areas for migratory birds in compliance with the Migratory Bird Treaty Act (MBTA), threatened and endangers species in compliance with the Endangered Species Act (ESA), and wetlands/streams in compliance with the Clean Water Act (CWA). This presentation will go over what the job entails, along with some of the many different opportunities that are available as a DOT biologist and the valuable experience and knowledge available in these positions. Examples include mussel surveys; coordination/collaboration with the US Fish and Wildlife Service (USFWS), the US Army Corps of Engineers (USACE), the Missouri Department of Conservation (MDC), and other agencies; wetland delineations; bat surveys; and training opportunities.



Taylor MacDonald is a Senior Environmental Specialist for MoDOT, covering the Northeast and St. Louis regions of the state. She evaluates transportation projects for impacts to threatened/endangered species, wetlands/streams, migratory birds, and stormwater, in addition to being involved in MoDOT's statewide wildlife-vehicle collision study (WVC) and wildlife crossings project. She graduated in 2019 with a B.S. in Biology with a concentration in Natural Resources Conservation & Wildlife Management from the University of Central Missouri, and she is also getting her master's in Fish and Wildlife Science and Management from the University of Idaho. Her focal taxa are herpetofauna (amphibians and reptiles), and her master's capstone will cover the spatial analysis of herpetofauna roadkill hotspots and habitat associations in Missouri, with implications for wildlife crossing structures. Before coming to MoDOT, Taylor worked for the Missouri Department of Conservation and Missouri Department of Natural Resources, and volunteered at the USFWS Big Muddy Wildlife Refuge. She was recently elected to the Midwest Partners for Amphibian and Reptile Conservation (MWPARC) advisory board, and hopes to highlight the issue of road mortality for herpetofauna.



Caleb Knerr is Senior Environmental Specialist with the Missouri Department of Transportation (MoDOT), covering the Improve Interstate 70 program as the Environmental contact and specializing in: Clean Water Act Section 404 permitting with the U.S. Army Corps of Engineers; threatened and endangered species surveys and habitat assessments for Section 7 Endangered Species Act consultation with U.S. Fish and Wildlife Service; Migratory Bird Treaty Act compliance; and Stormwater reviews for MoDOT projects. Caleb is also the project manager (PM) for MoDOT's statewide wildlife-vehicle collision (WVC) hotspot analysis and prioritization project and the I-70 WVC mitigation projects funded by the FHWA Wildlife Crossing Pilot Program (WCPP) and INFRA grant. He also specializes in conducting freshwater mussel surveys for MoDOT projects. Caleb graduated from the University of Missouri in 2014 with a B.S. in Fisheries and Wildlife and has worked for MoDOT since March of 2015.