



gai consultants

➤ Rare, Threatened, and Endangered Bat Studies

The conservation and natural resource permitting process can be cumbersome without the right partner. GAI Consultants has a long history of successfully navigating through rare, threatened, and endangered (RTE) species consultation and critical issues analyses. Our environmental studies and ecological surveys cover a broad range of RTE species, including bats, and our environmental professionals keep projects on schedule.

Federally-listed species are protected by the Endangered Species Act (ESA) from intentional "take," which includes habitat modifications; therefore, projects that may contain habitat for the species must consider potential effects that could arise from project development. In support of our clients, GAI's team of biologists perform environmental reviews, GIS habitat analyses, field

habitat assessments, presence/absence surveys, conservation measure planning, and agency coordination/consultation.

Across the Eastern United States, the federally-endangered Indiana bat (*Myotis sodalis*) arises frequently during U.S. Fish and Wildlife Service (USFWS) reviews of proposed projects, particularly those that could involve tree clearing. Our biologists conduct surveys and studies not only for the Indiana bat, but other bat species listed as threatened or endangered by USFWS and certain states. This includes the federally-endangered gray bat (*Myotis grisescens*) and Virginia big-eared bat (*Corynorhinus townsendii virginianus*), which typically occupy caves year-round. It also includes the northern long-eared bat (*Myotis septentrionalis*), which USFWS listed in 2015 as federally-threatened

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across its range. In addition, the USFWS is currently evaluating other bat species for possible listing under the Endangered Species Act.

GAI biologists have extensive experience performing and coordinating studies to successfully help clients avoid, minimize, or mitigate habitat impacts to satisfy federal and state agency requirements for wildlife protection. GAI's bat program is led by two federally-permitted bat biologists with over 25 years of environmental consulting experience. They have been responsible for bat projects in most of the Eastern states across the various ranges of bat species.

GAI's solid reputation in environmental consulting is supported by our proven ability to conduct initial siting and red flag analyses, field habitat evaluations, presence/absence surveys, GIS mapping and spatial analyses, avoidance or mitigation planning, and agency coordination. We work with clients to

obtain environmental clearance for their pipeline or electric transmission line routing, new highway corridor, or site development projects.

GAI is committed to assisting clients with permitting issues related to bats and other listed species. Our biologists are dedicated to supporting project development while at the same time working to conserve natural habitats for plants and wildlife.

Rare, Threatened, and Endangered Bat Study Services

- Habitat assessments
- Mist net surveys
- Acoustic surveys
- Radio-telemetry studies
- Roost tree emergence studies
- Portal searches and sampling
- Conservation plans
- Mitigation and monitoring



Virginia Big-eared Bat



Indiana Bat



Mist Net



Bat Hibernaculum

TRANSFORMING IDEAS INTO REALITY FOR OVER 55 YEARS, GAI is an employee-owned, multidiscipline engineering and environmental consulting firm. We serve our clients worldwide in the energy, transportation, real estate, water, municipal, government, and industrial markets from offices throughout the Northeast, Midwest, and Southeastern United States. Conveniently located to assist you with your project needs, we offer the following comprehensive engineering services:

GAI Consultants Services:

- Airport Planning and Design
- Bridge and Structure Inspection and Design
- Coal Combustion Residuals Management
- Construction Inspection and Management
- Cultural Resources Management
- Economic Analyses and Strategies
- Electric Transmission Design and Siting
- Environmental Engineering
- Environmental Studies, Species Studies, Permitting
- Gas Pipeline Surveying and Mapping
- Geographic Information Systems (GIS)
- Geotechnical Engineering and Geology
- Impoundment and Landfill Permitting and Design
- Land Development Engineering
- Landscape Architecture and Design
- Master Planning and Urban Design
- Mechanical, Electrical, Structural Engineering
- Natural Gas FERC Certification and Permitting
- Nuclear Energy Engineering Support
- Right of Way and Appraisal Support
- Land Surveying and Mapping
- Transportation Planning and Design
- Utility Management Consulting
- Water, Stormwater, Wastewater Management