

Geographic Information Systems (GIS)

For more than 25 years, Geographic Information Systems specialists at GAI Consultants have applied cutting edge technology and innovative concepts to capture, analyze, and create information products that communicate project goals to stakeholders, regulatory agencies, and public gatherings.

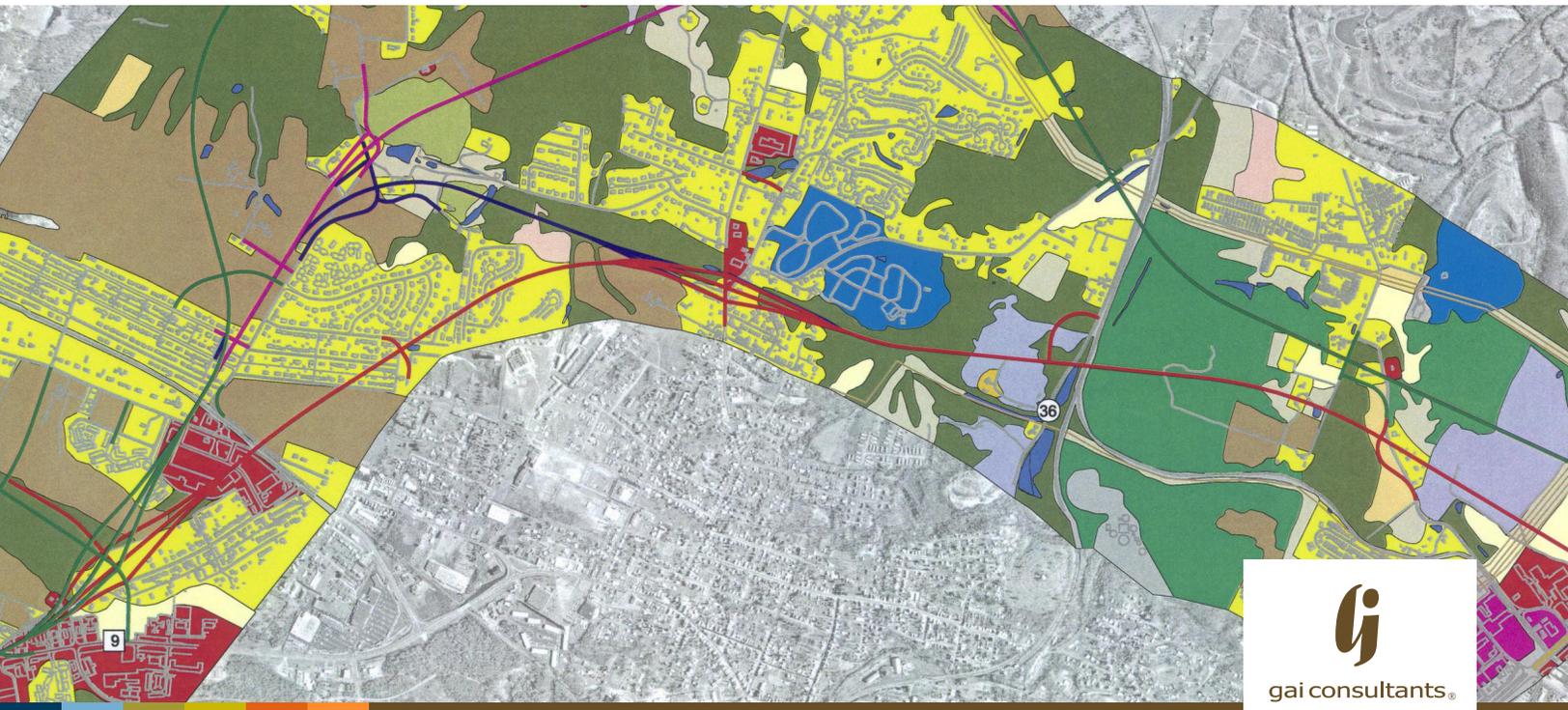
Premier capabilities in applying GIS technology to clients' projects means clients get a better focus and vision for the best possible outcomes.

GAI specializes in applying GIS technology to environmental studies and permitting, and our capabilities extend to data management program development and implementation, system planning and analysis, database development, web-based mapping application design, map and "map book" production, virtual simulation, and modeling. We collect and analyze data for environmental impact statements, air quality and risk assessments,

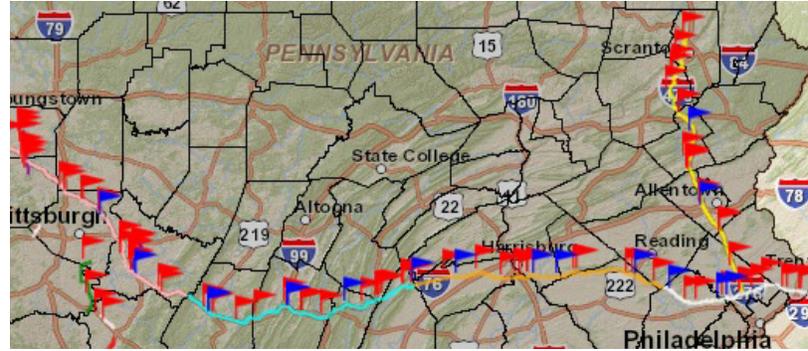
archaeological investigations, groundwater investigations, transportation studies, regulatory compliance monitoring, due diligence studies, and land-use planning.

GAI's system planning techniques evaluate project requirements early in the planning stages for utility routing, site selection, infrastructure and land-use planning, and site remediation. Our database development process includes system design, data migration, and quality control procedures for high-volume project data storage. Through system analysis, experienced GIS specialists gather, convert, and analyze data using custom tools. They set data management protocol, and develop spatial and tabular data for data management projects.

Modeling is a powerful GIS tool for comparing potential project sites and GAI couples this with our premier abilities in virtual simulation. We develop 3-D site, environmental, and socioeconomic impact analyses into a visual display of project alternatives for clients and their project stakeholders.



Service Profile



GAI's success with GIS rests in our ability to focus on the components that are critical to success—project development, data requirements, spatial analysis, and data presentation. We work with clients to determine their goals and objectives prior to gathering data on topography, geology, hydrography, wetlands, land use, aerial imagery, transportation networks, areas of archaeological importance, and zoning and planning.

GAI reviews each GIS databases for quality and completeness before analyzing the inclusionary and exclusionary criteria that meets project requirements. A critical part of database development is addressing questions concerning client preference and regulatory

constraints. GAI's flexibility in modifying criteria to achieve accurate results enables our GIS specialists to deliver a product that answers client, owner, and regulatory agency questions.

Producing dynamic and informative maps and tables that support findings adds value to clients' projects. GAI's user-friendly graphic displays for agency review and public meetings educate project stakeholders and build public consensus. With GAI and GIS working together, reliable data is managed in a quality-controlled environment to provide information that helps our clients make intelligent project decisions.

Geographic Information Systems (GIS) Services

- Web-based mapping and database development
- Constraints analysis and due diligence studies
- Regression analysis and predictive modeling
- 3-D site analysis and socioeconomic impact analysis
- Air quality, risk, and mine subsidence assessments
- Archaeological investigations
- Environmental impact statements
- Wetland and groundwater investigations
- Hazardous and industrial waste management
- Utilities Routing
- Site remediation and site selection studies
- Transportation and land-use planning
- Traffic analysis and transportation system design
- Public meeting support

GAI Services Summary

- 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

The scope of professional services that are provided by or offered out of each GAI office including, but not limited to, engineering and surveying services, is governed by the professional and business licensing requirements of each individual State or jurisdiction in which the GAI office is located and whether GAI has the requisite professional and business licenses for that State or jurisdiction. Nothing on GAI's Web Site or marketing materials is intended to be interpreted or construed as offering to perform professional licensed services where prohibited unless the licensing requirements have been met. Engineering services are not offered out of GAI's Northern Kentucky (Florence) office location. Surveying services are not offered out of GAI's Illinois location or by our New York subsidiary.

