

GIS & Remote Sensing

As an international science engineering and consulting firm, RTI International provides comprehensive geographic information system (GIS) solutions in the areas of water resources, energy, and environment. RTI employs a staff of geospatial experts and partners with industry-leading geospatial technology providers like Esri, Microsoft, and ERDAS. Our expert toolkits include ArcGIS Desktop, ArcGIS Server, ArcIMS, ArcSDE, Spatial Analyst, 3D Analyst, IMAGINE, SQL Server 2008, .NET, Visual Studio, Python, and web-mapping platforms such as Bing and Google. RTI's team of engineers, GIS, and remote sensing experts produce meaningful solutions so managers can make strategic and informative decisions about today's global issues.

RTI provides GIS and remote sensing services for different applications, such as water resources, water utilities, agriculture, irrigation, energy, environmental, and emergency management. Services include:

- Image processing and analysis of products ranging from synthetic-aperture radar (SAR), optical, and thermal data obtained from airborne and satellite sensors
- Crop type classifications using multi-temporal images, vegetation indices, and minimal ground truth data
- Evapotranspiration mapping using surface-energy balance algorithms
- Irrigated lands monitoring and water source identification
- Irrigation system mapping and analysis
- GIS design, custom application development, and spatial analysis
- Enterprise GIS implementations using ArcSDE and ArcGIS Server
- Cartography and visualization
- Flood mapping and hydraulic analysis
- Time series data analysis
- Custom web mapping using ArcGIS and open source tools

Center for Water Resources

RTI's Center for Water Resources (CWR) specializes in predictive analytics – data acquisition, analysis and modeling, visualization, and dissemination - giving customers the capacity to make informed decisions about water use. Our core areas of technical expertise include river basin modeling, monitoring, and data analysis; reservoir operations and hydraulics; flood and drought forecasting, risk assessment, response, and mitigation planning; hydrologic hazards and consequences analysis; water quality protection; database and software systems integration; and decision support systems.