In all aspects of water resources management, monitoring and forecasting are critical services that help managers make informed, analytical decisions.

RTI International’s advanced hydrometeorological monitoring and hydrologic forecasting services provide actionable information for flood warning, hydropower operations, water allocation, agriculture operations, and more. Our services can help you make critical water resources decisions based on real-time conditions, as well as conditions that are hours, days, weeks, or seasons into the future.

The RTI Center for Water Resources provides both user-driven forecast systems and web-based subscription services built on the latest science and technology, data sources, analysis, and product delivery methods. We take pride in partnering with our clients to develop and implement sustainable systems that best meet their needs.
**FEATURED PROJECT**

**Alabama Power Inflow Forecasting System**

Client: Alabama Power (AP)  
Country: United States  
Sector: Floods, Water Management  
Related Services: Hydropower, Risk Assessment, Data Management, Planning and Allocation; River Basin Operations

RTI led the design and implementation of a hydrologic forecast system with accompanying reservoir operations model for AP.

The system offers real-time (hourly) data integration, modeling, and visualization for all of AP’s reservoir management region, which includes 3 major river systems and 11 reservoirs. This allows AP staff to efficiently schedule reservoir operations for hydropower generation, environmental flows, and extreme flood events.

Prior to the project, RTI worked closely with AP to develop a design and implementation plan that best suited AP’s needs. This plan included a Delft Flood Early Warning System platform, real-time ingestion of observed and forecast meteorological products, Sacramento Soil Moisture Accounting rainfall runoff model, RiverWare simulation and rules-based reservoir operations models, and the integration of existing AP Hydrological Engineering Center River Analysis System hydraulic models. A primary outcome of the project was the development of the AP reservoir management staff’s internal capacity to sustainably maintain and update their system.

**ADDITIONAL MONITORING AND FORECASTING SERVICES**

- Designing, improving, installing, and maintaining monitoring networks of precipitation, temperature, and streamflow gauges
- Gathering, storing, and manipulating field-collected and remotely sensed data
- Integrating existing data sources, models, and operational systems with new data and technologies to deliver enhanced water resources information
- Providing training, documentation, manuals, procedures, and monitoring and evaluation frameworks