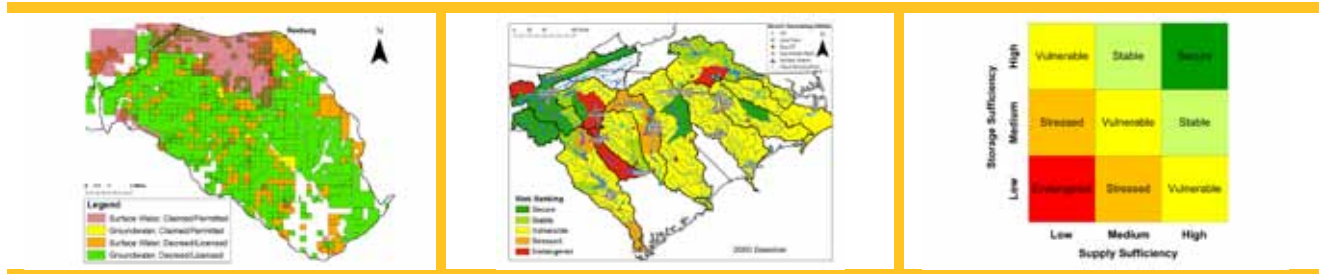


Regional Watershed Risk Analysis Platform (R-WRAP)



RTI International is combining its expertise in hydrology, model development, and advanced geographic information systems technology to create a new generation of flexible tools—such as the Regional Watershed Risk Analysis Platform (R-WRAP)—for evaluating risks to water resources and to the communities that depend on those resources.

Overview

Climate change is widely expected to create significant disruptions in the global hydrologic cycle leading to sea-level rise, shifts in precipitation patterns, and further degradation of water quality. Potential changes in precipitation and temperature could impact water supplies over wide regions of the planet. Within these regions, however, there is likely to be significant variability in the vulnerability of individual communities or economic activities to climate-induced impacts on water resources, depending on

- The capacity and reliability of available water storage infrastructure
- Current levels of consumptive water demand relative to available supplies
- Local geologic and hydrologic characteristics
- Institutional frameworks governing water allocation and interbasin transfers
- Local geography, land use, and vegetative cover.

Measures designed to adapt to climate change-induced disruptions of water supplies will be more effective, in terms of both performance and costs, if they are targeted toward those populations, facilities, or economic activities that are located within the most vulnerable geographic

locations. The R-WRAP system categorizes the relative vulnerability of water supplies within individual 8-digit hydrologic units based on a quantitative analysis of the sufficiency of both supply and storage capacity relative to current and future demand.

In addition to the R-WRAP tool, RTI has also released the Watershed Flow and Allocation model (WaterFALL™), a highly scalable and interactive tool designed to simulate a broad range of hydrologic functions.

RTI has performed a number of projects to date in the area, including a comprehensive, long-term assessment of water resource vulnerabilities in the southeastern United States and an evaluation of risks to water supplies in the eastern Snake River basin. RTI is currently supporting the Inter-American Development Bank in a multi-year effort to identify climate change threats to water resources throughout Central and South America.

More Information

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