



# ECOLOGICAL ASSESSMENT

The quantity and quality of water in streams significantly impacts ecosystem health, as well as all aspects of water use and management. Water flow, temperature, and quality should mirror natural conditions as closely as possible to sustain a healthy, functioning freshwater stream ecosystem. Large differences from natural conditions or a decrease in the overall health of a stream can result in stressed habitats that cannot support aquatic life.

Ecological assessment services offered by the RTI Center for Water Resources can help you understand and improve the health and condition of aquatic ecosystems using statistical and geospatial analysis and hydrologic and water quality modeling. We can also help determine ecological flows for a range of stream characteristics and develop regulatory guidance to increase protection of water quality and ecological conditions.

Assessing the health of—and guiding protective actions for—watersheds and aquatic habitats





## FEATURED PROJECT

# Integrated Assessment of Watershed Health for the Clinch-Powell River System

Client: U.S. Environmental Protection Agency (EPA)

Country: United States

Sector: Ecosystems

Related Services: Climate Resilience, Source Water Protection



RTI conducted comprehensive, natural systems-based assessments to (1) evaluate aquatic ecosystems and their contributing watersheds and (2) characterize the relative health of these watersheds to guide future protection, restoration, and education activities. RTI scored more than 3,000 catchments using 13 metrics characterizing the landscape condition, hydrologic condition, fluvial geomorphology, water quality, and biological condition including habitat. For the hydrologic condition metrics, RTI used the Watershed Flow and Allocation model (WaterFALL™) to determine alteration of flow metrics. Results were provided in technical reports and factsheets.

## ADDITIONAL ECOLOGICAL ASSESSMENT SERVICES

Ecological flow determination

Ecosystem service evaluation

Watershed health and  
ecological assessments

Water quality impairment and  
use assessments

Water quality monitoring and  
data compilation

Pollutant source assessment  
and mitigation



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