Development of Surface Water Availability Website for Georgia

STATE OF GEORGIA - ENVIRONMENTAL PROTECTION DIVISION

PROJECT SUMMARY

One of the impacts of climate change is that drought conditions are becoming more severe. Water managers at both the local and state levels are finding it difficult to determine water availability because of these drought conditions. To better prepare for these conditions, Riverside Technology, inc. computed unimpaired flows for the State of Georgia, and developed a website for sharing the information with project participants.

LOCATION
Georgia, U.S.A.

PERIOD
2008 – 2009

PROJECT DETAILS

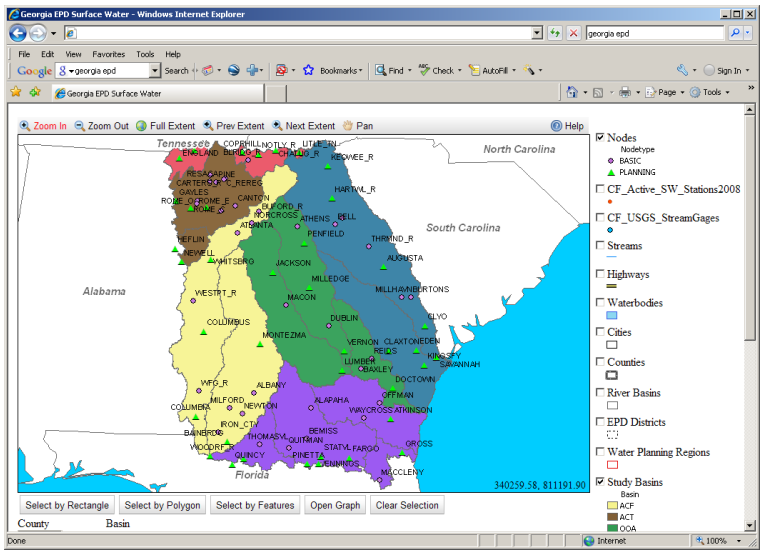
The State of Georgia has experienced severe drought conditions, leading to a greater need for understanding and optimizing water supply within the State. Riverside Technology, inc. (Riverside), as a subcontractor to ARCADIS, provided water resources engineering services related to data collection, quality control, and estimation of unimpaired (natural) flows for Georgia's rivers.

This effort utilized software from the US Army Corps of Engineers (USACE) Hydrologic Engineering Center (HEC) and the TSTool software developed by Riverside. Input and analysis results time series are stored in HEC-DSS files.

Riverside also implemented an interactive web mapping application to view spatial layers and provide access to the time series. ESRI's ArcGIS Server provides access to the spatial data. The ESRI JavaScript API was used to implement the map interface for web browsers.

Extreme Drought Conditions

The time series processing components in TSTool were utilized in a web application to read HEC-DSS files and provide plot images and time series data for interactive plot web pages. This allows simple access to data as well as more complicated processing such as summing demand time series in a specified region. Template workflow and plot definition files were implemented to allow new data analysis and output products to be added to the site with few or no software changes.



Web Map Application for Viewing Spatial Data and Surface Water Availability Time Series

RELATED PROJECTS

Development of Identified Projects and Processes Database for Colorado

Web-Based Climate Change Decision Support System

Joint Front Range Climate Change Vulnerability Study

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