

Boulder County RiverTrak® Forecaster

BOULDER COUNTY

PROJECT SUMMARY

Boulder County Office of Emergency Managers required a PC-based flood forecasting system that would read data from an existing data collection network at specified intervals to generate streamflow forecasts based on existing conditions. Riverside Technology, inc. implemented its RiverTrak® Forecaster software for Boulder County.

LOCATION
Colorado, U.S.A.

PERIOD
1998 – 1999

PROJECT DETAILS

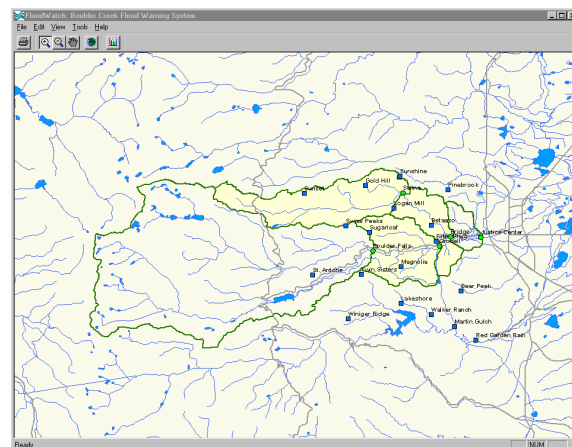
The City of Boulder, Colorado is located northwest of Denver, Colorado, adjacent to the Rocky Mountains. Downtown Boulder rests at the base of a steep, narrow canyon that leads up into the mountains. Historically, heavy rain and rain-on-snow events have resulted in flood conditions and danger to businesses and homes adjacent to the river.

As part of emergency management services in the county, the Boulder County Sheriff's Department maintains and operates an ALERT data collection network. Climate and streamflow data are automatically transmitted to a central base station. During severe events, emergency managers use this information to respond.

Riverside Technology, inc. (Riverside) was contracted by Boulder County to develop and implement a PC-based flood forecasting system for the Boulder Creek and Fourmile Creek watersheds for the Boulder County Office of Emergency Management. Riverside implemented its RiverTrak® Forecaster software for Boulder County.

RiverTrak® Forecaster is a stand-alone application that reads data from the ALERT database on a specified interval. RiverTrak® Forecaster processes precipitation and streamflow data to model rainfall-runoff for Boulder Creek and generates a forecast of streamflow based upon existing conditions. A state-space implementation of the Sacramento model with a Kalman filter runs on a 10-minute time step. RiverTrak® Forecaster forecasts streamflow at key locations for 12 hours into the future.

Boulder County emergency managers run this system continuously and use the information to assist in emergency response during large storm events. At specific river levels when evacuation may be required, RiverTrak® Forecaster provides 4 to 6 hours of lead-time to emergency responders.



Boulder County and Fourmile Creek Watersheds

RELATED PROJECTS

Streamflow Forecasting to Optimize Water Supply Operations for Colorado's East and West Slopes

Consolidated Database Design and Database Management System for Northern Colorado

Washoe County Flood Forecasting System

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