Colorado's Decision Support Systems

COLORADO WATER CONSERVATION BOARD

PROJECT SUMMARY

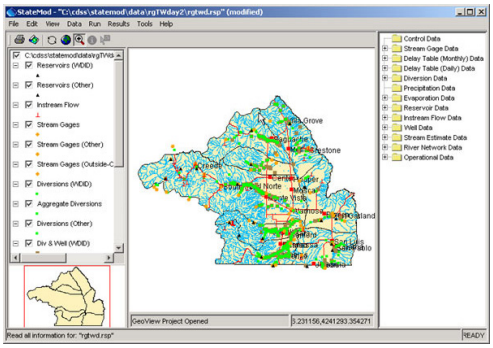
State agencies, water providers, and water users needed a means to make informed decisions regarding major water issues and policies. Riverside facilitated the decision-making process for stakeholders by developing tools for assessing, organizing, and evaluating water resources information.

LOCATION
Colorado, U.S.A.

PERIOD
1993 – Present

PROJECT DETAILS

Riverside Technology, inc. (Riverside) has been the primary systems integrator and software developer for Colorado's Decision Support Systems (CDSS), funded by the Colorado Water Conservation Board (CWCB) and the Colorado Division of Water Resources (DWR). CDSS development began with work on the Colorado River Decision Support System (CRDSS, 1993), followed by the Rio Grande Decision Support System (RGDSS, 1999), and then the South Platte Decision Support System (SPDSS, 2002). Riverside has been involved with feasibility studies, system design, and implementation at each phase.



Graphical user interface (GUI) for surface water model

The overall goal of CDSS is to help state agencies, water providers, and water users make informed decisions about major water issues and policies. CDSS consists of data that characterize the physical and administrative features of the river basins; it also has tools that provide enhanced water administration and water resource planning capabilities. The system gives state agencies, water users, and managers a better means for organizing and accessing a wide range of water resources information; this helps them evaluate alternative management strategies in response to population increase and demand, droughts, endangered species issues, and interstate compacts.

The Colorado River

Riverside helped the CWCB design and implement the HydroBase database, which contains historical, real-time, and administrative water resources data, and links to spatial data. Riverside also developed software to display and analyze HydroBase data. Using GIS and remote sensing tools, Riverside has generated parcel-level irrigated lands maps with crop type, irrigation methods, and water source attributes, which are used to estimate agricultural water use. Tools have been developed to process database and other data into model data sets in a way that documents data filling and edits, and allows data sets to be recreated at a later time. Riverside also has developed the graphical user interface (GUI) for the surface water model. This data-centered approach facilitates data sharing and streamlines data processing on large data sets.

The CDSS projects have incrementally enhanced the decision support framework, allowing for:

- More data quality review
- Increased data analysis and modeling
- An ability to answer more challenging and complicated questions

Riverside continues working with the CWCB to enhance and apply CDSS.

RELATED PROJECTS

Colorado River Decision Support System

Rio Grande Decision Support System Feasibility Study

South Platte Decision Support System

Instream Flow Decision Support System

Basin Needs Decision Support System

RIVERSIDE
global science solutions

CORPORATE
2950 E. Harmony Rd.
Suite 390
Fort Collins, CO 80528
(970) 484-7573

D.C. AREA OFFICE
1110 Bonifant St.
Suite 500
Silver Spring, MD 20910

www.riverside.com