

South Platte Decision Support System Spatial Information Systems Component

COLORADO WATER CONSERVATION BOARD

PROJECT SUMMARY

The Colorado Water Conservation Board required a user-oriented data infrastructure to facilitate information sharing. Riverside Technology, inc. developed a GIS database to administer data management and irrigated lands mapping.

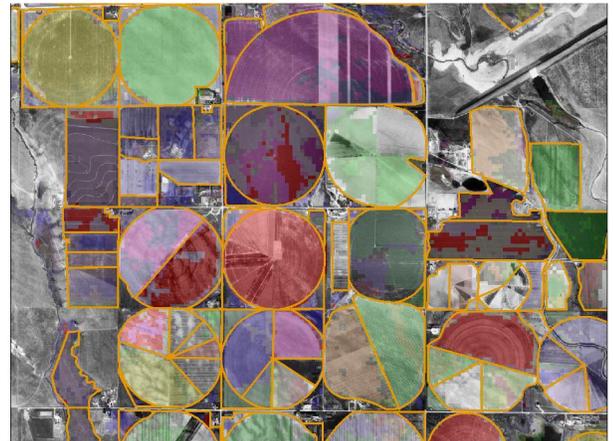
LOCATION
Colorado, U.S.A.

PERIOD
2002 – Present

PROJECT DETAILS

Colorado's Decision Support Systems (CDSS) is being developed by the Colorado Water Conservation Board (CWCB) and the Colorado Division of Water Resources (DWR). The CDSS is being used for overall water resources management and administration of water in the state. Beginning in the early 1990s, the CWCB completed CDSS components for several major river basins, and is now developing the South Platte Decision Support System (SPDSS). The objectives of the SPDSS are to:

1. Develop accurate, user-oriented databases helpful in the administration and allocation of the waters of the South Platte River and its tributaries.
2. Provide data and models to evaluate alternative water administration strategies.
3. Accurately represent current and potential federal and state administrative and operational policies and laws.
4. Promote information sharing among government agencies and water users.



Irrigation classification using GIS and satellite imagery

Riverside Technology, inc. (Riverside) was selected to develop the spatial information systems component of the SPDSS, beginning with a comprehensive GIS database and spatial analysis tools. The GIS database includes a seamless, high resolution, digital orthophoto base for the entire study area. This image base is being prepared in a compressed digital format to allow archive and rapid display of the images, which have a ground resolution of less than two meters. This base was used with 30 multi-temporal satellite images to map an estimated 1.5 million acres of irrigated lands in the basin and to estimate the consumptive water use for each irrigation diversion and for irrigation wells in the basin. The mapping was completed in consultation with State of Colorado water resource managers, water conservancy districts, and hundreds of irrigation ditch companies and water users.

In addition, Riverside is developing a number of specialized GIS data generation and visualization tools for use in maintaining the extensive water resources database, and for using the SPDSS for managing the water resources of the South Platte River.



RELATED PROJECTS

Colorado's Decision Support Systems

Instream Flow Decision Support System for Colorado

Rio Grande Decision Support System

South Platte Decision Support System

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