Steven K. Barrett
GIS/Water Resources Specialist, HRS Water Consultants, Inc.

EDUCATION

Master of Engineering (emphasis in GIS), University of Colorado at Denver, 2009
B.S. Environmental Studies, University of Kansas, 1997

Professional Certificates
Level 3 MS Access DB Certificate, 2008
GIS Certificate, College of Engineering & Applied Science, University of Colorado at Denver, 2007

EXPERIENCE

Mr. Barrett has over 9 years experience in the water resources field. He worked for the Colorado Division of Water Resources from 1999-2008 in various positions: 1999-2000 - Assistant Water Commissioner on the Animas River, Division 7 Office, assisted with the administration of water rights in Water District 30; 2001-2004 - Engineering Technician, Denver Office - worked in the groundwater department evaluating well permit applications inside and outside the Denver Basin, also assisted the public with questions regarding water and well use in the State of Colorado; 2004-2008 – Hydrographer, Division 1 Office - conducted stream flow measurements on the S. Platte River and its tributaries using various measurement techniques (wading, round-rod, and cabling), maintained gaging/satellite monitoring equipment, updated other government agencies with the latest measurement data, and developed an annual published record for each of his gages. Through his work with the Colorado Division of Water Resources, he has developed a good understanding of the priority system and how water rights are administered in the State of Colorado.

Since starting work at HRS, Mr. Barrett has been involved in numerous projects ranging from water rights change of use cases and augmentation plans to monitoring water levels in alluvial aquifers. His participation in these projects included:

> Completed a water supply/demand analysis for a water & sanitation district inside the closed basin of the San Luis Valley. Project work included: analysis of client's leased water rights, review and analysis of streamflow & diversion records, quantification of future demand, consumptive use analysis, and development of project geodatabase.
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> Performed historical consumptive use analysis for work in change of use cases, plans for augmentation, and water right valuations.

Used a combination of pivot tables and SQL queries to manipulate/standardize large amounts of data from different sources. These data were then organized in a single database for input into Colorado State University's IDS CU and AWAS programs to calculate consumptive use and stream accretions/depletions for the client.

GIS data management which included: custom data queries to facilitate project needs, processed fieldwork data and integrated into GIS projects; worked with ArcGIS model builder to streamline geoprocessing tasks, designed and implemented geodatabases based on project requirements, efficiently worked with data sets in differing coordinate systems by reprojecting them into a single projection/datum, and gathered and/or created new imagery and GIS coverages.

Used GIS to georeference and rectify several aerial photos which were then used to determine historically irrigated areas. Calculated these irrigated acreages using standard GIS techniques.

Used GIS and advanced spatial analysis techniques to develop subsurface layers which were then used by staff groundwater modelers for input into groundwater models.

Produced numerous presentation quality figures and maps for reports using GIS. In addition, he has used GIS to convert shape files to KMZ files which can then be input into Google Earth for client presentations or client use.

Examination of decrees, diversion records, water rights, and well logs to meet project objectives.

Setup, installed, and has maintained several data loggers in monitoring wells for various HRS clients.

Responsible for updates and maintenance of several large client databases.

Professional Organization Memberships
Colorado Ground Water Association