

## Obtaining Water Data for Oil Shale Research Using Hydroseek

**Abstract:** (Your abstract must use 10pt Arial font and must not be longer than this box)

This paper demonstrates a new search engine called "HydroSeek" for retrieving water data useful for oil shale requirements. It is expected that Piceance Basin oil shale development will require water from nearby local sources as well as the adjacent Colorado and White Rivers. Colorado River withdrawals are subject to the Colorado River Compact of 1922 which allocates withdrawals among states based on estimates of virgin flow rates within the Colorado River Basin. These earlier flow estimates appear to have been significantly overstated and should be reviewed. In addition, it will be important to critically assess all available water quantity and quality data of potential water sources for oil shale commercial development. This task can be daunting due to its magnitude and complexity. HydroSeek facilitates GIS based searches of pertinent water data in multiple databases simultaneously by overcoming certain structural and semantic heterogeneity issues. Useful and in-depth data collected by HydroSeek on water discharge rates for the Piceance Basin rivers discussed above will be critiqued and compared with earlier estimates of the same information, using the Department of the Interior's 1973 Final Environmental Statement For the Prototype Oil Shale Leasing Program as a base reference. The results of the paper will be a familiarity with the HydroSeek search engine, as well as updated hydrological data applicable for Piceance Basin oil shale development purposes.