

6.3 **Common Data Repository Development and Water Resource Assessment in the Piceance Structural Basin**

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The energy industry, Federal, State, and local agencies, and water districts have developed an open and collaborative data-sharing and water-resource assessment program for the Piceance Structural Basin in Colorado. The goal of the program is to provide resource managers, industry, agencies, and the general public with ready access to the most inclusive, consistent, and comprehensive surface- and ground-water resources information needed to identify and address energy development (including oil shale) and associated human-activity effects on western Colorado waters. A web-accessible common data repository is in development for the Piceance Structural Basin area that includes historical and current water-quality data that were collected ancillary to oil-shale research and traditional energy exploration and development. Content from the data repository will be used to prepare a baseline water-resource assessment report. Baseline assessment results will inform development of regional water-resource monitoring plans that are intended for implementation by industry, agencies, and others. Broad collaboration for regionally-scaled monitoring is needed and will create opportunities to discern cumulative and regional effects on water resources from traditional tight-gas extraction as well as potential oil shale development. Initial water-quality monitoring activities include stream sites along the White River, Colorado River, Piceance Creek, Yellow Creek, and Corral Gulch. Ground-water monitoring will begin during 2009 in the Piceance, Yellow Creek, and Mamm Creek areas. Ground-water monitoring will include determination of residence time, redox chemistry, and other monitoring elements needed to observe the occurrence of and predict the fate of contaminants that may enter the ground-water system.