

Shaping Water Access and Allocation

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The state of Colorado's Division of Water Resources considers water use for oil and gas (OG) extraction activities as short-term and an insignificant percentage of Colorado's overall water consumption.

At the same time, the number of active OG wells in the state has gone from 22,500 in 2002 to almost 54,000 in 2016. Changing water use is particularly important on the South Platte River in Weld County and the Colorado River in Garfield County since they contain the largest percentage of active wells with 22,724 and 11,067 OG wells respectively. Throughout its lifecycle, each well uses between 3-8 million gallons, or between 9-24 acre feet of water. To meet the increasing demand for OG use, water suppliers, right holders, and Colorado's diverse community of users are innovating ways to navigate the rules governing water access and allocation to find flexibility in the State's water institutions.

With financial support from the National Institutes for Water Resources and the [Colorado Water Institute](#), this research study examined how OG water users are able to find flexibility in the system when other uses have not, who is impacted by this type of flexibility, how, and what it means for access by other users.

A comparative case study methodology provided the necessary in depth examination of the 'how' and the 'why' of social and political change processes, an important step in building our understanding of water access and allocation mechanisms. Then, an analysis of water rights for OG development was based on identifying current water sourcing strategies in Weld and Garfield counties. Data were gathered from published research and from a document analysis of primary source formal water court agreements including Substitute Water Supply Plans (SWSPs) and Water Right Decrees.

Trends in Oil and Gas Water Access and Allocation in Weld and Garfield Counties

Water rights have evolved differently across Weld and Garfield counties and within the South Platte and Colorado River Basins. On the western side of the Continental Divide, Garfield County is the second largest producing county after Weld County with 11,000 active wells and located on the main stem of the Colorado River Basin (CRB). The main stem of the CRB has 268,000 or 8% of the state's irrigated acres of farm and ranch lands.

In sum, issues of water access related to OG development have been identified piecemeal through individual conversation and in newspaper articles demonstrating the real concerns of farmers, environmental groups, and state legislators. No substantive studies have examined the tradeoffs of water access for the state's diverse users. At the same time, formal policy often has divergent impacts on groups of people. This research examines these potential impacts and tradeoffs and will propose policy alternatives. The data analysis is still continuing so stay tuned for comprehensive research findings this fall!