



Water roars down the spillway at Stagecoach Reservoir in June. Regional water experts warn that potential oil shale development would have huge water demands. [Enlarge photo](#) — Photo by [John F. Russell](#)

Oil shale water woes

Denver, Western Slope officials cite huge demands for resource

By [Tom Ross](#) ([Contact](#))

Snarfing down an entire bag of potato chips shouldn't make you feel as guilty anymore, thanks to Denver Water and Frito-Lay.

It's not about the oil the chips are fried in, but the water used to wash the potatoes, Melissa Elliott told 200 water leaders gathered at Grand Junction's Two Rivers Convention Center on Friday.

"At the Frito-Lay plant in Denver, potatoes are washed in water that has been washed and recycled," Elliott said. "They save about 40 acre-feet of water a year."

That's enough to meet the annual needs of 40 households.

However, the water required by snack food companies adds up to small potatoes when compared to the "800-pound gorilla" Dan Birch described to those attending the annual water seminar hosted by the Colorado River Water Conservation District.

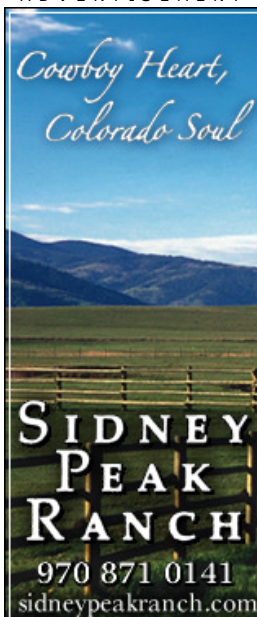
Birch is the deputy general manager of the river district and formerly the manager of the Mount Werner Water District in Steamboat Springs. He has participated with members of Northwest Colorado water roundtables in a study of the potential water needs of a re-emerging oil shale industry in the region.

The Piceance Basin in Western Colorado has the potential to yield 1 trillion barrels of oil and for every barrel of oil, the industry might require as much as 1.5 barrels of water, Birch told his audience.

Bottom line: The nation's hunger for more oil someday could swallow all of Colorado's remaining undeveloped water under the Colorado River Compact of 1922.

"Oil shale is the 800-pound gorilla," Birch said, adding that the power demand associated with shale — whether from coal or natural gas-fired power plants — represents an enormous demand for water.

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New technologies for extracting oil from the shale deposits in Northwest Colorado and neighboring states still have a long way to go before they are proven to be economically feasible, Birch stressed. And the projections being developed by his group are based on assumptions. But he wants the region to have some basis for anticipating the future.

Compact looms large

Most of Friday's speakers were preoccupied with planning for the eventuality that someday, Colorado will use more water than it is entitled to. In that scenario, even the water used to wash potatoes would become precious.

"We all know we have a finite resource left to develop, and increasing demand," Pete Kasper of Delta County said. "It's time to figure out what to do with the water we have remaining."

Kasper, who has been a farmer all his life, is president of the board of the Colorado River District. Moffat County Commissioner Saed Tayyara and attorney Tom Sharp of Routt County are among the 15 board members.

Kasper's concern is to avoid the possibility that Colorado someday will have to struggle to meet its Colorado River Compact obligation, which requires Colorado to send a major portion of Colorado River water downstream to users in Arizona, Nevada and California.

Colorado someday could face a compact "call" on its water by the lower basin states and be forced to curtail water consumption in order to meet its legal obligations.

"The question of water availability looms large as Colorado grapples with water supply planning in the face of drought, population growth and the issues associated with climate change," Kasper said. "Because other river basins are over-appropriated, the Colorado River system is an obvious target for new trans-mountain diversions" to Colorado's Front Range.

Banking water

No one has agreed on just how much unused water remains for Colorado to develop within the about 3.9 million acre-feet it is entitled to under the 1922 compact. However, estimates range between 400,000 and 600,000 acre-feet.

Eric Kuhn, general manager of the Colorado River District, said the number could quickly be halved when you consider the water that would be tied up when existing water storage projects like Windy Gap in Grand County are built to their full potential.

And there are other projects actively being considered that would tie up another big chunk of Colorado's remaining water. They include one plan, recently stalled, to pump water from the Yampa River east over two mountain ranges to meet future Front Range needs. A second proposal, still actively being pursued, would capture water from the Green River where it flows through Colorado just above its confluence with the Yampa.

Either of those projects has the potential to push Colorado up against the limits it has remaining to be developed.

One option to help Colorado manage its way through a compact call, being explored by the Colorado River District and its counterparts at the Southwestern Water Conservation District, is voluntary participation in a water bank.

Peter Fleming, general counsel of the Colorado River District, said a water bank would comprise some fraction of water rights that pre-date the 1922 compact and consequently, were not taken into consideration when water was divvied up between the upper and lower basin states.

The water districts might solicit those water owners and offer the regular payments just to participate in the water bank. Then, in future years, when Colorado could face curtailment of its consumption under a compact call, the owners would be paid more money for releasing water needed by users in different parts of the state.

Whatever comes in the future, Elliott assured her audience that Denver Water customers are becoming more respectful of the Western Slope water they consume.

Her agency, she said, is aware that residents of western Colorado look at the Front Range and say, "could you learn to use what you have wisely before you ask for more?"

"That message, we've heard it loud and clear," Elliott said.

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